UNIVERSITIES QUARTERLY

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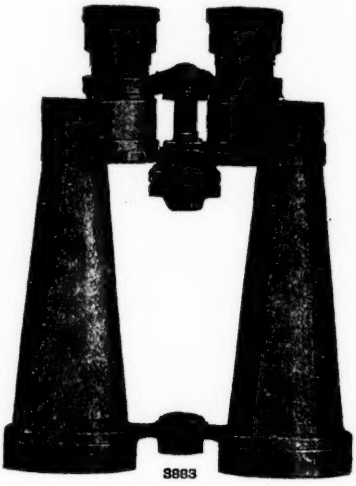

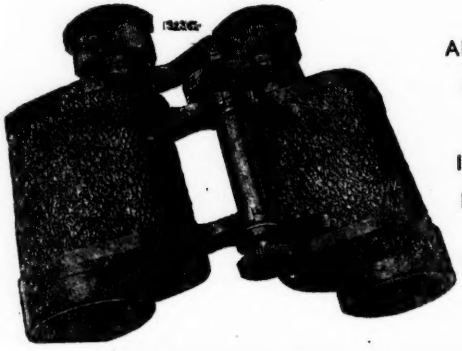

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NOTES

Report of the University Grants Committee

Readers of the " Universities Quarterly " have by this time read the Report of the University Grants Committee on " University Development from 1935 to 1947." It is therefore unnecessary to present a resumé of the Report. It will serve as a valuable record of an interesting, if trying, period in the history of the universities. This period has been marked, as the Committee state, by the profundity of changes in the university scene and by the opening of a new era in the relation of the universities to the State, on the one hand, and on the other, to the community. Despite the current obstacles and difficulties the period is " rich, beyond all precedent, in opportunities." The function of the Committee has changed accordingly: " Before the war this function expressed itself mainly in the interpretation to the Government of the policies and the financial needs of the Universities. More recently, however (as our revised Terms of Reference show), we have become increasingly concerned with the task of assisting the Universities in their endeavour to plan their developments on lines that meet as closely as possible the needs of the community."

As one reads the Report one is impressed with the widening scope of the universities in their efforts to meet the needs of the community. But these needs are expressed in terms of the newly created special Sub-Committees of the University Grants Committee. When an effort is made to discover what the needs of the community are, and how they were ascertained, it is difficult to find them presented except in terms of the special areas that are being developed in addition to the traditional faculty organisation.

There are, of course, some excellent statements running through the text, as, for example, on the importance " of maintaining, and ultimately of improving, the quality of university education notwithstanding a pressure of student numbers hitherto unknown"; on the character of post-graduate studies; on research and teaching; and on teaching method. But one misses a definite statement on the place of the university in the community, a statement which is

particularly needed to-day when so many references are vaguely made to " the university in the service of the community."

Nor is the aim of university education defined except in terms of specialised and professional training. There is not much guidance in the statement that " The need for some form of central planning of university developments is patent and is well recognised by the universities themselves. It is generally accepted that it is the responsibility of the universities to provide facilities for education in all the academic disciplines, for the appropriate training required by entrants to the various professions and for the promotion of fundamental research." Nor is it enough to recommend ratios for the distribution of students (" the proportion of Arts students should not anywhere fall below one-third of the total number "). What is needed in this period of profound changes is a clear call for the provision of that breadth of education which is needed as a common language of discourse for educated men and women in general, and for understanding the world in which they live.

Paradoxically, the definition of a sound aim for education is presented in the Committee's discussion of Extra-Mural Education: " The upheaval of the war sharpened and strengthened the psychological tendencies to which we referred twelve years ago; on the one hand, the desire for self-realisation and a wider distribution of the privileges which education brings, and, on the other, the sense of civic responsibility which causes adults to seek a more intimate understanding of the social order in which they live and in the reshaping of which they have their part to play. A further circumstance tending to swell the demand for adult education is the wider diffusion of cultural interests," etc. Rightly interpreted, two groups would emerge—the university student who is to be trained as a specialist and the adult who is to be educated for a responsible life in his community. This distinction is even carried further in the discussion of methods of teaching. The Committee are somewhat critical of the lecture as the staple mode of education in university classes and commend further experimentation, but a few pages later offer a much better approach to the subject in the discussion of the method appropriate to tutorial classes in adult education.

It is to be hoped that, since the principle that should govern the relations of the State and universities has now been established, the University Grants Committee will, as a result of the work of their

Sub-Committees and their consultations with bodies concerned with universities, assist by suggestion and advice in the further development of university education. The number of problems to be solved continues to increase.

Universities and the State

Sir Walter Moberly's Rede lecture on "Universities and the State," delivered on November 18th at Cambridge, is an important contribution on an important subject. The increasing support that must come to universities from public funds has everywhere directed attention to the problem of the relation of the universities and the public authorities that provide the funds. The problem was discussed last July at the conference of the Universities of the British Commonwealth, and the danger of government control implied in the recommendations of the Report of the President's Commission on Higher Education is one of the chief points of criticism in the United States.

The heart of the problem is how to safeguard freedom in education from the danger of increasing control that may be threatened as the financial support from public, i.e., government sources is increased. Sir Walter's analogy was very much to the point when he remarked that "It was said that he who pays the piper calls the tune. But the cogency of that doctrine varied with the piper. If you were engaging Toscanini and his orchestra you would do well to leave to him the major voice in deciding the programme." Indirectly the analogy also stresses the importance of the recruitment and adequate remuneration of the members of the teaching profession, particularly at a time when competitive bidding is becoming more and more severe.

There must be developed, on the one hand, a sound basis for the partnership between the universities and the State, and, on the other, a clearer understanding on the part of the public "of the real character of the university and its real need of autonomy, if the university is to enjoy a privileged status in a democratic society." Nevertheless, while one may agree with Sir Walter that the university cannot become "a maid of all work," the demands of the public cannot be ignored.

Sir Walter has restated the fundamental principles underlying the relations between the universities and the State, which have governed the practice of the University Grants Committee. There

still remains another problem that needs a statement as enlightened as the Rede lecture dealing with the internal government of a university. This is all the more urgent in view of Sir Walter's statement that the predominant share in managing any concern in a partnership must be left to the partner who supplies the knowledge and experience. Is it possible to apply this principle to the management of affairs within a university, or will fear of control and assumption of power by permanent administrators mean a constant accumulation of more committees?

Universities and Secondary Education

The controversy that is being waged over the organisation of secondary education does not seem to have attracted the attention that it demands of those concerned with university education. The universities are, of course, not likely to be affected immediately. More than enough candidates are applying for admission so that high standards of selection can be maintained. What will happen in the future, however, if the plans to establish multilateral schools are carried out on an extensive scale? And what is likely to be the effect of such an organisation of secondary education upon the standards that are considered essential for success in university studies?

An answer to these questions can be found for the United States, where the "comprehensive" or omnibus high school, attended by pupils of all grades of ability, is the characteristic form of secondary school. It was hoped when schools of this type began to be established about forty years ago that academic standards for entrance to college could be maintained. This hope has not been fulfilled, and the effort to educate pupils of varied intellectual abilities has resulted in neglecting those at the two ends of the scale—the dull and the able. This is admitted in a statement which appeared in the last *Yearbook* issued by the American Association of School Administrators. "According to conservative and authoritative estimates, more than a million children with exceptionally high intelligence are now enrolled in the public schools, but special training is provided only for about one in ten of this group. Because the public-school programme is so generally designed for the large middle group, and all too seldom is adapted to those who are gifted, these children must be rescued from the neglect which usually is their lot."

More recently President James B. Conant of Harvard University

joined an increasingly large group of American educators in a plan for identifying pupils of ability and providing for them the type of education best suited to them. In an article, " Education in an Armed Truce," which appeared in the *Atlantic Monthly*, October, 1948, President Conant wrote: " I wish some organisation identified in the public mind with concern for *all* American youth would take some dramatic action to demonstrate a vigorous interest in the gifted boy and girl. This would serve as an encouragement to all teachers. The school should be stimulated in a direction which in some quarters has been rather spurned as being undemocratic and old-fashioned. A National Commission for the Identification of Talented Youth has been suggested by one group of educators. The sponsoring of this by public school administrators and teachers would be the sort of thing I have in mind."

There are warnings in these statements that cannot be ignored, even if allowances be made for differences between the forces that influence education in the two countries.

World University Statistics

The difficulty of comparing statistics of the number of students in the universities in different parts of the world is well illustrated by Dr. M. M. Chambers in an article on " University Student Population in the World " which appeared in the " Association of American Colleges Bulletin " (Vol. XXXIV, No. 3, October, 1948). Dr. Chambers is director of the Foreign Universities Project undertaken by the American Council on Education to assemble information on the Universities of the world in preparation for the publication of a Handbook. The chief difficulties, apart from those connected with securing data that are accurate, comparable, and for approximately the same period of time, arises from the varying use of the term " University " in different countries. The article gives the number of students in the United States in 1947 as 2,338,226 in 1732 colleges and universities, and 653,000 in the 772 institutions of university level in the U.S.S.R. in 1946, with an increase to 722,000 planned for 1948. These figures give a total of about 3,000,000 students in the two countries or approximately half the total estimated number in all the countries of the world. Dr. Chambers points out, however, that, according to European standards, the work of the first two years of the American college would be regarded as equivalent to the work of a secondary school, while entrance to

the institutions called " Universities " in the U.S.S.R. is based on ten years of education. There is another difficulty which is often ignored in comparing the number of students in the universities of Great Britain with those in the United States. There are in Great Britain large numbers of young men and women who continue some form of professional preparation as apprentices or articled clerks, and who must meet the academic requirements of examinations conducted by some professional body. In the United States such students would be attending a college or a university and be included in the statistics of university enrolments, while the British student is not included. These are only examples that illustrate the importance of creating a central clearing-house on all matters that concern the universities of the world—number of students, administration, finance, aims, and above all, their relation to the culture and problems of their respective countries and the world.

The Fulbright Plan

The signing on September 22nd, 1948, of the agreement between the Governments of the United Kingdom, and the United States to put the Fulbright Act into effect took place too late to be noted in the last issue of the *Universities Quarterly*. The Fulbright Act, signed by President Truman on August 1st, 1946, provided for the use of foreign currencies and credits realised through the sale of surplus lend-lease property to send Americans to study, teach, and engage in research abroad, and to provide for the cost of travel of nationals of other countries who wish to study, teach, or engage in research in the United States.

The agreement signed last September provides for the appointment of a Joint Commission of twelve members, of whom seven are to be Americans appointed by the United States Ambassador in London, and five British members appointed by the Secretary of State for Foreign Affairs. The Joint Commission, whose principal office is in London, will make recommendations for the use of funds, not to exceed the sterling equivalent of $1,000,000 a year; the total amount of funds from the sale of United States surplus property that may be used for educational purposes is $20,000,000. The funds will be used to finance American students, teachers, professors, and research scholars, who may be selected by the United States Board of Foreign Scholars in Washington to engage in educational activities in the United Kingdom and Colonial Dependencies.

Grants to Americans will include travelling and maintenance expenses, tuition, and incidental expenses. Students and others eligible under the Act from the United Kingdom and Colonial Dependencies will receive only travelling expenses to and from the United States. If they wish to study in American institutions in countries participating under the Act, that is, outside the United States, they may receive the same grants as Americans.

In view of the present currency situation the chief beneficiaries under the Fulbright Act will be Americans, unless scholarships and maintenance allowances are made available by the higher educational institutions or private organisations in the United States. There is still another possibility that the intent of the Act will be realised if Congress makes the necessary appropriations to put the Smith-Mundt Act into effect. This Act passed by Congress and signed by President Truman in January, 1948, provides for the establishment of an educational exchange service to co-operate with other nations in (1) the interchange of persons, knowledge and skills; (2) the rendering of technical and other services; and (3) the interchange of developments in the field of education, the arts, and the sciences.

For the present non-Americans in lend-lease countries will have the benefit only of the cost of transportation for study, research, or other cultural activities in American educational institutions.

The School Examinations Age Limit

The Secondary School Examinations Council in its report on "Examinations in Secondary Schools" recommended that "An examination . . . should be available each year to candidates who are at least sixteen on September 1st. The minimum age should be raised . . when circumstances permit." The context suggests that the Council desired to see "a wide and general secondary course up to the age of at least 16" and two years Sixth Form study of both specialist and non-specialist subjects (paragraph 21). The Minister of Education in Circular 168 announced that he would amend the Primary and Secondary Schools (Grant Conditions) Regulations to prescribe a minimum age of sixteen for the time being, though he refers to the possibility of a minimum age of seventeen.

The minimum age limit has perhaps been the subject of more controversy than any other of the Minister's decisions. The grammar schools in particular have for the most part been vehemently opposed to it. More opinion than fact has been contributed to the

discussion, and for this reason we welcome the publication (in the "Times Educational Supplement" of November 6th) of some statistics of the Northern Universities Joint Matriculation Board. These show that the average age of candidates for the Board's School Certificate in 1948 was 16 years 3 months on September 1st, in the case of boys, and 16 years 5 months in the case of girls. The percentage of boys under 16 on September 1st was 34.5, the corresponding percentage of girls was 21.7. A higher proportion of under-sixteen candidates than over-sixteen candidates passed, and the younger candidates secured more credits. The Board's figures also show that a high proportion of the State scholars nominated by the Board in 1948 had taken the School Certificate before they were sixteen, viz., 81 per cent. of the boys and 56.5 per cent. of the girls.

Those who are opposed to the sixteen-year age limit will argue from these figures that a pupil should be allowed to sit for an examination when his ability and aptitude fit him for it, and that his teachers rather than the Minister are the best judges of this. The grammar schools foresee great staffing difficulties if pupils who have followed the same course up to the Fifth Form have to be provided with different courses the following session, because they were born before and after September 1st respectively. Supporters of the age restriction object so strongly to what they consider the harmful influences of external examinations that they prefer the difficulties which an age limit on a given date admittedly entails. The pros and cons of the debate are too many and involved to be discussed in detail here. It is most unfortunate, however, that they were not canvassed more fully before the Minister took his decision.

University Entrance Requirements

In one sense the universities and their matriculation boards are not principals in this controversy. As the Minister has stated, he has been led to believe that even with the age limit of sixteen "the Universities would find it possible to relate their entrance requirements to the examination for the proposed "General Certificate of Education." They are also quite prepared to frame their scholarship requirements on the same examination. The universities appear to be considering requirements similar to their present ones. The grammar schools contend that these are not unreasonable in themselves, but that taken in conjunction with the age limit of

sixteen they will be difficult to meet. Having from their point of view lost their battle with the Minister, they look to the universities to extricate them from their difficulties. It is to be hoped that the universities will go as far as they can to meet the grammar schools, on which they must depend for the preparation of their students. The steps which they could take without prejudice to the standards they must rightly maintain would be to make some use of general papers at the Ordinary level suitable for Sixth Form candidates, and to reduce the scope of the syllabuses of their Higher School Certificate and Scholarship papers in framing the new Advanced and Scholarship papers. The degree of specialisation required by some of the present syllabuses has in any case gone beyond reasonable bounds. Finally, the difficulties with which the Minister has faced the grammar schools could be reduced if the universities could agree on greater uniformity in their requirements as between one university and another. We are glad to know that discussions are going on between some of the larger examining bodies to this end.

Awards—The New Proposals

The Report of the Working Party on " University Awards" was neatly timed for discussion at the Home Universities Conference on December 18th, 1948. It is a Report which will profoundly affect the universities and might have been expected to arouse the wrath or approval, hopes or fears of many of those present. In fact the discussion of Sir Philip Morris's paper was desultory and disappointing, and showed little sign that more than one or two speakers had grasped the significance of the Report or had faced its implications. There appeared little willingness to grapple with the most challenging issues which the recommendations raise. These are:—
1. the proper balance between state and local authority awards ;
2. the proper balance between assisted and unassisted places ;
3. the importance of ensuring justice, not only between those who are accepted or rejected by any one university, but between the universities as a whole; 4. the new problems of selection by the universities to which the recommendations will give rise.

The last two issues were particularly stressed by Sir Philip, and he fairly pointed out that whatever objection may be taken to the proposal for a central clearing house, it is still necessary that the problem of securing justice should be faced. In the past it has been legitimate for the universities to act independently, and some might

say arbitrarily, since the number and amount of scholarships were limited. In the future the burden of doing justice is much heavier, since between 60 and 70 per cent. of students will depend for financial assistance on a university's decision.

There is also a more practical argument in favour of some arrangement, however modest, for centralising information about applications. At present, owing to the fact that most students apply to three or four institutions, there is no means of telling accurately how many students are seeking a university education and in what subjects.

On the subject of selection, Sir Philip underlined that the Report presents the universities with a wholly new problem of selection. Not only has the Working Party recommended an increased number of open scholarships to be supplemented by the Ministry: it has also very properly emphasised the necessity of placing the burden of selecting those who will obtain grants upon the universities. Therefore the 7,000 or more local awards will be made only on the recommendation of a university. For two years deans of faculties and college tutors have been groaning under the weight and inadequacy of their selection methods. The new burden will take an Atlas to bear.

There is, however, no need for discouragement. The report is a courageous as well as a controversial document. It is much more likely that, if numbers at the universities are maintained, the numbers of assisted students will have to rise above rather than fall below 11,000. Fortunately the Working Party has resisted the temptation to secure uniformity in the type and method of granting awards and of selecting students.

The New Chairman of the U.G.C.

The announcement that Dr. A. E. Trueman will succeed Sir Walter Moberly as Chairman of the University Grants Committee will be received with pleasure in university circles. Not only is Dr. Trueman already well known as Deputy Chairman, but his appointment indicates a welcome continuity in policy towards the universities—at least so far as such continuity lies within the hands of the U.G.C. We extend to Dr. Trueman our good wishes when he takes over in October 1949.

THE STANDARDS OF ADVANCED STUDIES AND RESEARCH IN SCIENCE AND TECHNOLOGY*

By Sir Lawrence Bragg

Professor of Experimental Physics, University of Cambridge

In talking about the standard of advanced studies I take it that we are interested in the relation between pure science and technology and in the types of education which should produce good scientists and technologists. I shall draw most of my illustrations from my own subject of physics, not only because I feel on safer ground here, but also because I think it is a subject in which this relation is particularly important at the present time, and which therefore serves as a good example. In the other physical sciences, chemistry and engineering, it has been a long-established practice for men with a higher training in universities and technical colleges to pass on to industry. They are following a well-explored path; but physics as a subject is relatively a newcomer in the technological and industrial field. As short a time ago as the years immediately before the war, relatively few physicists found their way to industry. There is now a very large demand for physicists, stimulated by the war. It was clear in the war that physicists as such had a considerable part to play in development work of all kinds. But I will only use physics as an example; my remarks apply to the physical sciences generally. I am leaving on one side the vast range of biological sciences and their relation to agriculture and medicine, where the problems are very different.

Pure Science and Technology

I would like to make two points before I start on my theme.

(*a*) I will deal in generalisations. There are exceptions to most statements, but they have to be ignored in a talk like this. To quote from that fascinating book, *An Insect Book for the Pocket*, written by the late Edmund Saunders, " the only other course is the omission of generalisation, but as generalisation makes the main difference between the Beatitudes and a page of the telephone book, I have preferred to run the risk of occasional inaccuracies."

* An address to the Ninteenth Annual Convention of the Yorkshire Council for Further Education, here reprinted by permission of the Council.

(*b*) I am going to grasp the nettle, and stress the differences between pure science and technology. I do not think we shall get anywhere unless we do this. Why is this issue so often shirked, and why is it rash, as I am so well aware, to stress the differences? The main reason seems to be a bad one, a snobbish feeling that pure science is in some way a finer vocation than its application to technical ends, and that people who practise it are more disinterested and on a higher plane; in fact, as we might say, that the alternative to pure research is impure research. If pure scientists foster this idea they should be ashamed of their snobbery. If technologists allow themselves to be imposed on by it they are guilty of lack of faith in the ideals of their own vocation.

I shall therefore nail my colours to the mast at the beginning of the action, and say that I believe science and technology to be different and complementary in outlook and aspiration, though they share a common body of knowledge and of techniques. I wish to express also my belief that we shall only finally arrive at a healthy balance between the two when technology sets its own standards for higher degrees, quite independent of those set by the university for its special products. For instance, I am one of those who feel it very wrong that the higher work of a technical college should sometimes be that of training men for a London External degree, and that as soon as possible the practice of training men with this academic standard in view should be replaced by something better. It is pointed out with justice that the London External has served a great purpose and produced fine men in the past. Of course it has, because fine men went in to it. It required great courage and determination for a man with many other duties to set aside the time to work for his London External; but the answer is that a man of this type should have had an opportunity to go to a university in the ordinary way. I realise also that the existence of this External degree has often helped a technical college to do higher work and attract a staff suitable for it. One cannot but have the most profound sympathy with these aspirations, but again, it seems to me, there should have been a higher technological award available; the London External should only be thought of as a temporary expedient.

Votaries of pure science like myself must never forget that we are very privileged people. We are largely protected from the battle of life; we are free to devote our energies to any interesting line of investigation we would like to take up; we have to be almost

incredibly inefficient and lazy if we are to be sacked from our jobs; the quarterly salary comes in regularly; we do not clock in; some half a dozen hour-long lectures are our fixed engagements for the week. What are we expected to give the community in grateful acknowledgement for these privileges? I have already quoted from that fascinating book of Sanders' on Insects, and I cannot resist another reference to one of his accounts. The life of a university teacher reminds me of his description of the queen bee. She is surrounded for the whole of her active life by a body of attendants. They keep all worries and difficulties away from her, feed her, comb and brush her. They lead her to cells which they have made in a warm and well-ventilated hive. Her sole duty is to lay an egg in each. When it is clear that her fertility is declining they are still kind to her. They do not sting her, clip her wings, or throw her out of the hive as they do the drones, but gently crush her to death in a peaceful form of euthanasia. Correspondingly, university professors are retired at 65, and though not crushed to death, the same result is obtained by placing them on a large number of the less important committees.

The queen is essential, but the community does not want too many queens. A hive, in fact, only allows one, but we need not, I hope, follow the bees to this extent. They start as ordinary members of the community, but are brought up in specially luxurious surroundings and given a special diet. They are unfitted for ordinary life, but cherished because of their essential function. There is no indication that the worker bees obey the queen's commands or respect her judgment about the ordinary affairs of the hive.

No analogy must be pressed too far, but I think this is a useful one. The functions of the university teacher or member of any other institution devoted to pure research are to produce the germs of new ideas, so to order and teach fundamental knowledge that it can be easily assimilated by his students and by a larger section of the community, and finally to breed a small and select race of people like himself, who will eventually replace him and carry on a similar function in the next generation. The training given to such people is a very specialised type of pabulum. It produces a special frame of mind unfitting them for many other avocations.

Standards for Admission to Research

Now I have been asked to talk about " the combination of aca-

demic and industrial qualifications which might be accepted for admission to research work leading to a higher degree." I have to deal with the standard required for such admission, and we must ask ourslves what achievements and innate abilities we wish to assess, because I think the answer is a very different one for the man who is being trained to become a pure scientist and the man who is to become a technologist, and here I think real harm has been done to technology by the prestige of the university higher degree. We university teachers are proud of this prestige, but we must not be complacent. In this case also we have been accorded a unique privilege by the community. Our students are freed from all other preoccupations so that they can be taught by us for some five or six years in all if they go on to a higher degree after graduation. We have them entirely at our disposal; we can plan our courses and set our own tests; we have generously maintained laboratories, and a proportion of teachers to students of 1 to 8, or even 1 to 5 in the older universities, so that the men can get much individual attention; schools help us by training their best pupils with a university education in view. We have, in fact, had an unfair advantage as compared with technology.

The harm to the cause of higher technological training which this prestige of the university degree they do arises, it seems to me, from the idea that all higher education must be of the university type, governed by university standards and inspired by university ideals. The university training is academic; it is planned to make an individual who has qualities and gifts of a certain kind into a scholar who can do a special kind of work exceptionally well, and this is achieved at the cost of making him less able to cope with any of the other ordinary problems of life. It is not merely, or even mainly, a question of the type of knowledge imparted to him; psychological factors are also involved. The man loses interest in a whole range of activities. They seem to him to be tedious, and he feels he is being asked to do work in which he cannot use the training he has received. Industrialists, on the other hand, complain that the university-trained man lacks experience and knowledge of the world. On either side disappointment is due to the fact that an instrument is being used for a wrong purpose for which it was never intended.

Please do not understand me to be implying that there is no place for the university-trained product in industry. I should

deserve to lose your sympathy if I expressed any such view. Some men with this specialised training are valuable and essential to industry, but their numbers will always be small. University training could never supply the large number of trained technologists which our country needs unless its whole character were changed. If the universities attempted to provide them they would be diverted from their essential function of producing the scholars, in the scientific sense as well as the literary sense. This is, and must remain, their chief preoccupation, one which is vital to our industrial life because it is the source of new knowledge.

The tests which have been designed to assess men of this type are not the right tests for technological higher degrees.

The Background of Knowledge

Let me now try to define what we expect from a man who gets a higher university degree. The requirement is a double one, that the man should have attained a proper background of knowledge before he starts his research, and that he should show himself skilled as a researcher. I shall consider the background of knowledge. It may be directly tested in his oral examination and by the way he has written up his thesis. It is indirectly tested by demanding that the man should have gone through certain previous training and got a good degree, before he enters on his research course.

One difficulty about planning a science course is that the body of scientific knowledge is increasing so rapidly. This has caused many people to press for a four-years' course; I may say in parenthesis that I am personally not in favour of this solution. I think it is a good thing for the young people to get their formal examinations over by the end of three years. If by that time they do not work hard of their own volition, and need the stimulus of an examination to do so, they are not worthy of further training. I would prefer to see all the advanced work, for which there is admittedly no place in the three years' course, represented by advanced lectures which research students attend. I think we should also resist the tendency to over-specialisation. For instance, I like to see all physics students taking the same course, a broad course which touches on all aspects of physics. Why do we insist on this breadth even for our people who are going on to do some specialised form of research later on? The reason lies in the peculiar conditions under which pure research is carried out. It is not aimed research;

a man must be free to follow up any interesting line. While he may start with one object in view, some interesting point may crop up which completely alters his line of work. Even if it has no bearing on the original project he should be encouraged to follow the new trail if it looks interesting. We must remember that in the history of science the greatest researches nearly all started as fascinating sidelines which opened up when a man was pursuing quite a different object. It is for this reason that so many of us feel the danger of establishing central research institutions with an avowed object. In the long run they slow up progress rather than hasten it, because they make the first-rate men whom one puts in such places inefficient by preventing them from following their bent. The pure researcher is often accused of retiring into an ivory tower, of not caring whether anything he is discovering will be of use or not. This is not really fair; scientists in general are thrilled if something they have discovered is of use, but they fight to the last ditch against its probable usefulness being a consideration in planning what they should do; they know that if they were to let that happen the whole progress of science would be very much slower.

A scientific education, therefore, must be broad. The men must have heard something of all branches of their subject, know how to look up relevant data, be interested in the achievements of leaders in other branches of science, and able to understand the significance of their discoveries. They can never tell beforehand what field they may be led into by their investigations.

To take a concrete example, I quote the arrangement of the third year physics course in the Cavendish. The first two years are equally important, but the third year gives one an idea of the final object aimed at. Of the 224 hours in the academic year, some 116 are on classical physics, such as electricity, optics, heat, structure and mechanical properties of matter; some 84 are on newer aspects of physics, summarised as atomic physics, such as quantum theory, atomic and nuclear physics, electric and magnetic properties; the remaining 24 lectures are given on the mathematical tools of analysis useful to a physicist. Together with this, they spend some 240 hours in the practical laboratory. We do set a few special questions in the final paper of the Tripos, and there are courses of 16 lectures attended by special groups of students to correspond, but apart from this all the lectures are common.

The time is all too short, but all branches of physics are repre-

sented somewhere. One can think of many things one would like to add to the course, for instance more physical chemistry, but we must not make it too long. The aim throughout is to make the student understand the fundamentals of his subject thoroughly, not to provide him with a wealth of information. I give a course in advanced optics, for instance, and I feel each year that there are three or four main principles of optics to explain, and that if I can get these across in my twenty-four lectures I have done well. The men acquire certain units or coins of thought which they are not likely to forget, and can use in future work.

The point I wish to make is that to learn all this at the universities is a full time occupation, and the preparation for it must be started some years beforehand. The granting of an M.Sc. or Ph.D. implies that the university considers that the student has had this preparation, as well as shown himself capable of pure research.

Pure and Applied Research

Can the student who has had this general academic course at the same time get the experience which makes him a good technologist? I very much doubt whether it is possible, though it is not for me to lay down what is required of a good technologist.

It is too crude to say that the whole difference between pure research and applied research is that in the latter case there is a definite object and that the temptation to follow side issues must be resisted. The difference, it seems to me, is a deeper one, and, as I have said above, a psychological one. To the pure scientist, the achievement which gives him satisfaction is that of discovering some new fragment of knowledge; to the technologist, that of obtaining some new mastery of his materials and making them do what he wants. The pure scientist is as delighted as surprised if the apparatus which he has built works 1 per cent. of the time, because in that favourable moment he hopes to make his new discovery; the technologist would be ashamed if it did not work for 1 per cent. of the time. To the one man the gear which he builds is the scaffolding, which is thrown away when the new knowledge has been gained; to the other, scientific knowledge is a means towards an end, the achievement of some technological or engineering triumph.

I do not think I am splitting hairs or drawing distinctions which are unrealistic. I have examined many students for higher degrees. From time to time we have before us a man who has not had the

standard university education but has gained his experience in industry. He may have done a brilliant piece of research, but when we ask him questions outside his subject we often find that the background which we expect is almost entirely missing. What are we to do ? I feel that such a man is every bit as good as a university student, and deserves an award that carries an equal status, but it is giving a false picture of his qualification to give him a standard university award.

Higher Technological Degrees

To sum up, I hope that we can set up some organisation of Higher Technology in this country on a par with university organisation in strength and prestige, but in no way depending on it, which sets for itself the standards to be attained by men getting higher technological degrees. It ought to have the same privileges as the universities, in particular their complete independence and right to set their own standards. Technology must always have a vast body of more elementary or part-time work, but the inspiration should come from this advanced side. I feel that we ought to consider any proposal for awarding higher university degrees for technology as a stop-gap arrangement. It may be wise policy for the time being because a new organisation is still lacking, but it ought not to be our final aim. It is impossible to exaggerate the importance of good technological training in this country; our very livelihood depends on it, and I think it should be given the same privileges as we fortunate people have in the universities.

But I fully realise that this is a matter for future planning, and that a more constructive suggestion must be made to meet immediate needs. Universities are the only degree-awarding bodies at present, and an award with the status of a degree is appropriate to the higher work which you have in mind. If a man with a technological background seeks admission to a university with a view to a Ph.D. or other research degree in mind, its doors should not be closed to him. I see no grave difficulty in judging the merit of the research itself by the ordinary machinery with its well-established standards, but I consider that the criterion for admission should be a different one. The universities rightly demand that he should have first distinguished himself in a broad scientific course, and their standard award involves this implication. I would like to see this qualification for admission replaced by a new type for

your applicants, a test set by technologists. They must guarantee that he has the type of ability and the experience of industry which will make him an outstanding man in his profession, just as we demand that he shall have got a high honours degree. There might perhaps be some distinguishing mark, " Tech." in brackets if you like, to show that this is the line he has followed and the way he has qualified.

I hope after hearing what I have said you will not give me the reproach which Balak son of Zippor gave to Balaam, though in this case in an inverse sense. You will remember Balak sent for Balaam to come and curse for him the children of Israel with whom he was about to engage in battle, and that instead Balaam blessed them. I hope you will not think that you have asked me to come and bless your ideas of an advanced university degree, and that I have cursed them. If I have made myself clear my intention is very different. I have pressed so strongly for a different type of recognition for technological degrees to that adopted by universities, not because I think that technologists are not good enough for our degrees, but because I think these degrees are not good enough for the technologists, in the sense that the tests which are applied leave out of account many qualities and abilities which it is your task to develop in your young people, a task for which we in the universities are not equipped by our particular brand of experience and knowledge.

THE UNIVERSITIES OF SOUTH AFRICA

By E. G. Malherbe

Vice-Chancellor, University of Natal

South Africa has five teaching universities, viz., Witwatersrand (5,100), Cape Town (4,300), Pretoria (3,250), Stellenbosch (2,300), Natal (1,900), and one federal examining university, the University of South Africa, which comprises four constituent colleges—the Orange Free State (1,200), Rhodes at Grahamstown (1,000), Potchefstroom (850), Huguenot (a women's college with 120 students).

The numbers of students (indicated in brackets) total roughly 20,000. Of these all but 12 per cent. are full-time. This works out to one full-time student for every 125 of the white population, some 2½ millions, in the Union of South Africa.

Before the war (1939) there were about 10,000 students all told, and one full-time student for 260 of the white population. The present abnormal increase, here as in most countries involved in the war, is largely due to the damming up of the normal student flow during the war years. It has caused university authorities many headaches to provide the necessary accommodation and staff. Materials and men were in short supply. As a result, most university campuses have been disfigured by (so-called) temporary buildings dotted all over the place. These structures, as experience in previous wars has shown, unfortunately have a tendency to persist. Similarly staffs have had to be augmented when the qualifications of the available personnel were admittedly low. These weaker additions unfortunately also tend to persist.

While the generous grants (£250 cash plus £800 interest-free loan to each ex-serviceman) which the South African Government has provided for those who wished to go on to higher education, undoubtedly brought into the universities some who were unfit for advanced studies, the proportion of failures proved to be much smaller than was anticipated. This unprecedented influx, moreover, has served to make individuals, families and employers in commerce and industry realise the value of university education in a way that they would otherwise probably never have done. In many cases where the father or the brother has had this experience they will tend to see to it that their sons and other members of the family enjoy similar opportunities. The chances are fairly strong, there-

fore, that the student enrolment will not decrease appreciably after the wave of ex-service students has spent itself, provided no further catastrophe such as a depression or another war overtakes the country.

Should it be decided to improve educational opportunities for the non-European section of the population, e.g., by a generous provision of bursaries for higher education, it is likely that student numbers will continue to increase for South Africa as a whole.

Geographic and Cultural Factors

The fact that such a small white population—about the size of a large city in Europe and in America—should have as many as nine university institutions (not to mention the Native College at Fort Hare) is a matter which often puzzles people overseas. A brief statement of the factors which have led to the evolution of such a multiplicity of institutions, therefore, seems to be necessary.

In the history of university education in South Africa two main factors have been operative: (*a*) geographic, and (*b*) cultural and racial. We are, in the first place, a European population of a little over two million scattered in small nuclei over an area of about half a million square miles, i.e., more than four times the size of the British Isles, in the Union alone. This small European population is entrusted with bearing the torch of Western civilisation over a vast sub-continent, outnumbered by more than ten to one by the Africans (or Natives, as they are generally called). It is, therefore, expected to a certain extent that the standard of general education maintained amongst this small minority will be higher than the average which obtains in a European country. Moreover, the population of the Union of South Africa is not just two millions but twelve millions, if non-Europeans are included. South African universities have to supply the professionally trained personnel not only for the Union but also to a large extent for the territories and colonies north of the Union—for the Rhodesias, Kenya, Tanganyika, Nyasaland, which need doctors, engineers, agricultural experts, economists and men trained in administration. Many young South Africans who during their movements up and down the continent come into contact with these countries have realised the importance of Cecil Rhodes' injunction: " There is your hinterland ! " inscribed on his statue at Cape Town where he stands with hand upraised and pointing to the North. In relation, therefore, to the needs of Africa there is no overproduction of university trained

men. In the second place, the white population of South Africa is composed of two virile European nationalities (English and Dutch), which, though geographically intermingled, cling tenaciously to their respective traditions and culture. These separatist tendencies, coupled to geographic conditions, frustrated most of the efforts in the past to evolve a simpler scheme. Thus Cecil Rhodes' idea of a single national university (for which he would have provided the money) situated at Cape Town came to naught, and the money was used instead to found another scheme of wider significance, viz., the Rhodes Scholarships, the unifying influence of which reaches even beyond the bounds of the British Commonwealth and Europe.

With the advent of Afrikaans (evolved from the Dutch of Holland) as one of the two official languages, and the fact that it is used as an exclusive medium of instruction in more than half the schools in the Union, university institutions have drifted into two camps differentiated chiefly by the medium of instruction predominantly used : English on the one hand and Afrikaans on the other. Thus it is to-day possible to pair off eight out of the nine university institutions according as they stand primarily for the English or the Afrikaans tradition respectively. In the South we have Cape Town and Stellenbosch, two universities only about an hour apart by train. A thousand miles away in the North we have Witwatersrand and Pretoria, also close together, one English and one Afrikaans. Next Natal University College (which was granted a charter for independent university status in 1948), a dominantly English medium institution, may be paired off with the University College of the Orange Free State, a dominantly Afrikaans institution serving an almost homogeneously Afrikaans speaking province. Lastly, we have Rhodes University College, situated in the Eastern part of the Cape Province among a predominantly English community with a strong Anglican atmosphere, which has its counterpart in the University College for Christian Higher Education at Potchefstroom, an exclusively Afrikaans medium institution with a strong Dutch Reformed (Gereformeerd) atmosphere. The ninth college, the Huguenot University College, is very small. It is mainly for women and was founded on a mixed Anglo-American tradition.

It should be noted that in the Afrikaans' institutions, while English is taught as a subject, the other courses from first year to Ph.D. are conducted through Afrikaans medium. The examinations are conducted and the theses are presented in Afrikaans.

This dualism in our higher education, owing to an insistence on cultural distinctiveness, may be deplored in a certain respect. It leads to duplication of effort and to a certain extent it is artificial, for the people of the two cultural groups are not separated territorially as, for example, in Canada. They intermarry freely and intermingle constantly in ordinary social, commercial, industrial and political life. Nevertheless such an educational dualism seems to be inevitable in a democracy when each section is free to insist on what it considers its rights.

In some institutions, e.g., in the Agricultural Faculty of the University of Natal and the Faculty of Veterinary Science at Pretoria, both English and Afrikaans are used as media and the graduates are expected to be proficient in both media in their subjects.

The Disintegration of the University of South Africa

The recent secession of the Natal University College from the Federal University of South Africa typifies a devolutionary process which has been going on since 1918, when Cape Town and Stellenbosch ceased to be a constituent college and became independent universities. Witwatersrand followed suit in 1921, and Pretoria in 1930. Now that Natal has also become independent, the University Colleges of the Orange Free State, Rhodes, and Potchefstroom have also signified their intention of applying for charters to become independent universities. This would involve the complete disintegration of the University of South Africa, which will be left with only one tiny constituent college, the Huguenot College. This institution will probably have to close down or amalgamate in some way with its stronger next door neighbour, the University of Stellenbosch.

Fort Hare, the Native College, whose students are prepared as external candidates for the examinations conducted by the University of South Africa, will probably be affiliated with the neighbouring institution the Rhodes University College, when the latter becomes an independent university.

During the last two years a Department of External Studies has been created at the headquarters of the University of South Africa. This is virtually a state-controlled and state-subsidised correspondence college which caters for the needs of those students who live out of reach of universities. The courses of study and the examinations of this Department of External Studies were con-

trolled and supervised by the Senate of the University of South Africa, consisting of the professors in the existing university colleges. What is to happen to this Department of External Studies when the Senate of the University of South Africa no longer exists, is a problem which has not yet been solved.

Another and a more serious problem is how to ensure that sound university standards will be maintained by the small institutions when they have all become independent. A solution may be found in the establishment of a strong Vice-Chancellors' committee which will operate under joint statutes in such a way as to maintain proper standards without interfering unduly with the autonomy of the respective universities.

Such a committee of executive heads of universities when duly constituted could also serve as a useful link between the universities on the one hand and the state on the other—particularly where matters of state subsidy and control are concerned.

Finance

The method of state subsidy which has been operative until the present time is briefly as follows : For capital expenditure on approved buildings the state provides a £ for £ grant. The subsidy for maintenance is based on revenue—roughly £ for £ on fees and other income, e.g., interest on endowments. This subsidy works on a sliding scale, starting on £2 for £1 for institutions with a small fee income, and tapering off to 5*s.* in the £1 where the fee income becomes over £95,000 per annum. In the case of subsidy on other income, the tapering off is more rapid, the 5*s.* limit being reached after £30,000.

Apart from the fact that on this formula the institutions could not meet the running costs, it has been found that making the government grant dependent on fees has had two unsatisfactory consequences: (*a*) Universities were forced to raise fees. If any bursaries or scholarships were awarded these had to be deducted from the fees for the formula: (*b*) It aggravated the tendency to develop chiefly those departments which were likely to be good fee-earning propositions and to refrain from establishing and developing those departments which concentrated largely on research and did not draw many students. Though it was probably not intentional, the dice were loaded in favour of the teaching as against the research activities of the university.

In 1947 the net expenditure on maintenance by all South African university institutions was £2,163,000. Towards this cost the government contributed nearly £1,000,000. The balance the universities had to find mainly from fees.

The New Subsidy Formula

Gradually the Government itself has become aware of the inadequacy of the existing formula. It has in several instances been constrained to augment the grant arrived at on the formula, for example to meet the costs of the sudden influx of ex-servicemen into the universities. Recently it has come forward with a new and rather forbidding-looking formula which it intends to apply retrospectively from January 1st, 1948:

Government Grant = S (2 log S—0.75 log F—K), where

S = approved expenditure on tuitional salaries,
F = fee income,
K = a coefficient which will vary from institution to institution according to its peculiar circumstances. When once determined this coefficient will remain constant for a period of years for a particular institution.

Whereas the old formula was based on *revenue* (i.e., the grant was a "function" of the fees raised and other current income from donations), the new formula is based on *expenditure*. Further, one of its objects is to discourage institutions from putting up fees. Thus an institution will actually get a smaller grant if it pushes up its fee income. Lastly, the grant will be commensurate with the biggest single item in university expenditure, viz., tuitional salaries.

Here, however, a new and somewhat disquieting element has been introduced. Formerly universities were left more or less free to spend as they pleased the Government grant (which varies from about 40 to 60 per cent. of the institution's revenue). Their salary scales were, however, limited, presumably on the principle that "public money should not be used to compete against itself." This was the only real limitation actually imposed. Now, however, that the state is going to pay practically all of the salaries, the university must first obtain approval before it can institute a new post, however small.

This gives a great deal of power to departmental officials. South Africa is not in the fortunate position of Great Britain, where such control is exercised by a University Grants Committee of very distinguished men with an intimate experience of the various phases of

university work. While some control is obviously necessary, it may become very irksome if not conducted in an understanding manner. And if universities have to forfeit their autonomy merely in order to get more money from the state, the price may prove to be too dear. It is possible, however, that some committee similar to the University Grants Committee in Great Britain may be set up to advise the Minister in these matters. But, where to find a body of men in South Africa, who will be regarded as so impartial and at the same time so experienced in university work that they will command the confidence of the universities as the University Grants Committee in Great Britain does, will be indeed a difficult problem.

It is because South Africa has valued an absence of governmental interference in universities that it has shown such a predilection for formulae which can be applied mechanically by any clerk to all institutions alike and with a minimum of interference by the Government as to the ways in which a university may choose to spend the money.

Another unsatisfactory aspect of the new formula is that no longer will any premium be put upon contributions from local authorities and private philanthropy towards endowment. The fact that under the old formula prospective donors knew that by making a contribution to the university's maintenance they were forcing the Government to contribute a similar amount, served as a considerable inducement to give money to universities—particularly in fostering some research project. Now that inducement is gone it is likely that universities will gradually drift into a condition of greater and greater dependence on the state.

Fees and Bursaries

The tuition fees range roughly from £45 to £84 per annum, depending on the type of course taken (fees for professional courses such as Medicine, Engineering and Law, generally being the highest), and on the particular institution. Fees in the large urban universities are higher than in the institutions in country towns.

Apart from grants given at present by the state to ex-soldiers, a temporary measure, there are hardly any state bursaries or scholarships for undergraduates. The majority of such bursaries and scholarships come from private bequests and the rest (a very small proportion) are put up by the university itself. The percentage of

students who benefit in this way is very small, at any rate not more than 5 per cent. The rest are dependent entirely on their own private means for getting a university education. Consequently the poorer section of the population, and particularly the non-Europeans are, with a few rare exceptions, excluded from this privilege.

Should the State embark upon a system of grants to students on anything like the scale obtaining to-day in Great Britain, student numbers will increase considerably, particularly from the non-European section.

New Demands

South Africa believes in education and also in higher education. Whether, as a result of this belief, we have not already dredged too deeply into the lower intelligence strata to maintain proper university standards, is a question which should be investigated. However that may be, one thing is certain : In proportion as the opportunities and facilities for higher education are extended to greater numbers of the population, a wider range of capacities and talents is being drawn into the university, an institution traditionally designed to cater for only a certain type—the type selected for ability in Latin and Mathematics. At the same time there is a clamour for the admission of a wider variety of subjects and courses into the erstwhile monastic precincts of the university in order to meet the demands of industry and commerce. The result is that the university is faced with the dilemma of either being a bed of Procrustes, resulting in frustration and wastage of time and money on the part of a large proportion of students who require a diversity of options, or of so lowering its standards that it fails in its important duty towards that selected few who can " take " Latin and Mathematics, and for whom the old disciplines of scholarship are essential, if the universities are to continue in their important function of extending the frontiers of human knowledge in the pure sciences and the humanities.

The only way out of the dilemma seems to be, first, to recognise that student guidance in terms of their capacities, intellectual background and future careers should become a much more integral part of the day-to-day work of our universities than it has hitherto been, and, secondly, to see to it that together with the offering of a wider range of fields in which students can specialise, there is also

some common core of study* or discipline in which all should participate and which will put upon each product of the university the mark of a university trained man, i.e., to distinguish him from the man who has merely learned a trade at a technical college.

In short, the injunction that the school must see to it that the right pupil gets the right education under the right teacher, is applicable also to the university.

To expect, however, that all the possible types of " right "education should be available in each of the nine university institutions is obviously absurd. Financially it would, in the first place, be out of the question to give each university in South Africa, for example, a medical school or an engineering school, which are very expensive to maintain. Secondly, the mere dearth of good instructors makes it imperative to concentrate such training in a few centres where the work can be done properly instead of spreading it thinly all over the country. The same considerations apply when providing facilities for advanced research.

From the students' point of view, the scope of guidance referred to above should extend beyond one single institution. This would require a definite effort on the part of universities to co-operate.

Research

It was owing largely to the enterprise and vision of General Smuts that in 1945 the " Council for Scientific and Industrial Research " was established under a full-time Director, Dr. Basil Schonland (a South African scientist who did outstanding work as Scientific Advisor on Montgomery's staff during the war). This Council was set up by Act of Parliament as a statutory body with guaranteed financial resources. In 1946-47 its Parliamentary grant was £375,000. It took over the responsibilities of the old Research Grant Board in regard to university bursaries, and grants for scientific research and developed a detailed scheme for the further support of such research by the provision of bursaries, research assistantships and grants.

Though the C.S.I.R.'s activities are not confined to universities, it serves the useful purpose of rationalising expensive forms of applied research amongst the various university institutions, thus

* The Universities of Witwatersrand and Natal are considering the introduction of a pre-degree year to serve as a common basis for all irrespective of the type of degree course to be followed. Whether this will be put into effect will depend chiefly on financial considerations.

preventing costly duplication. This it has done through the establishment of Industrial Research Institutes at universities in collaboration with the industries concerned. Thus, for example, at Rhodes University College a Leather Research Institute has been established and a Fishing Industries Research Institute at Cape Town. The University of Natal, though the youngest of the universities, has associated with it three research institutes ; at Durban it has the Paint Research and the Sugar Milling Research Institutes, and at Pietermaritzburg the Wattle Research Institute. In general these institutes are financed roughly on a fifty-fifty basis by the industry concerned and by the Government through the Council for Scientific and Industrial Research.

The University is, however, the body that is held responsible for the supervision and sponsoring of the institute which is usually housed on the university grounds. It thus ensures the closest association between the scientist technician, who concentrates largely on the short range scientific problems facing the particular industry on the one hand and the pure scientist who is at the university in a better position to tackle the long-term problems in the basic sciences which underlie the technical processes on the other. The fact that both these types of research workers can operate in a university atmosphere not only ensures a continual cross-pollination between the pure and the applied sciences, but also causes industry and commerce to regard universities as important contributors to national prosperity.

While the C.S.I.R. deals chiefly with the physical sciences, there is another body, the " National Council for Social Research," which awards scholarships and grants for research in the social, educational, psychological and humanistic fields. This Council operates on a sub-vote of the Union Education Department which acts as the secretariat. The N.C.S.R. is not a statutory body like the C.S.I.R., nor does it have at its disposal anything like the same funds. A borderline case is the Personnel Research section conducted by the C.S.I.R. This is situated at the University of the Witwatersrand and deals chiefly with the psychological problems in industry.

Agricultural research falls under the Union Department of Agriculture which finances the three faculties of Agriculture at Stellenbosch, Pretoria and Natal, and the faculty of veterinary science at the world famous Onderstepoort Research Station at Pretoria.

The future development of the whole of Africa is dependent on the contributions which scientific research can make, particularly in the fields of health, agriculture and anthropology. There is no reason why these researches cannot be conducted in South Africa.

The Non-European Students and Segregation

The last decade has seen a phenomenal rise in facilities provided by the State for the education of the non-European population, and particularly of the largest section, the Africans or Bantu, who are the most backward. During this period school enrolment has increased twice as fast, and State expenditure five times as fast as the rate of the growth of the population amongst the Africans. The result is a qualitative as well as a quantitative improvement, and an increase of those who desire university education.

There are to-day in South Africa about 27,000 non-European pupils attending high school. About 600 pass the matriculation examination every year. The largest proportion of these are Bantu and the rest are coloured (chiefly in the Cape Province) and Indian (chiefly in Natal). At the primary and secondary school level there is absolute segregation between white and non-white. At the university level this policy is departed from to a greater or less degree in some of the institutions.

First, there is the practice which obtains at the Cape Town and the Witwatersrand Universities, where a comparatively small number of non-Europeans—about 100 at Cape Town and about 180 at Witwatersrand—attend the same classes and work in the same laboratories as the European students. Secondly, there is the Fort Hare Native College in the Transkei, which is exclusively non-European with a little over 300 students. They sit as external students for the examinations of the University of South Africa.

Thirdly, there is the Natal University experiment under which about 350 non-European students are taught by the same staff as teaches the European students, but in a separate set of buildings, in a different part of the city. This was a condition agreed to by the non-Europeans (then mostly Indians), when these classes were started by the Natal University College in Durban about ten years ago. Nevertheless they sit for the same examinations and attain the same diplomas and degrees as are attained by the European students. They have their own common room, which, by the way, is much better furnished than even some of the staff common

rooms in the European section of the University. The Natal University has provided them with their own well-appointed library staffed by a qualified non-European librarian. Thereby they are enabled to participate in the whole university library. Instead of earmarking only a few special lecturers to lecture exclusively to the non-European students we strengthen the various departments so that the non-Europeans can have the benefit of hearing also the professors and senior lecturers in a subject. It is a condition of appointment that staff members in Durban are expected to lecture also to non-Europeans. This naturally means the duplication of lectures, and a considerable increase in staff.

It must be pointed out that even though there may be equality of *academic* rights in certain institutions, *social* bars between Europeans and non-Europeans in South Africa are still so strong that at no university institution in South Africa do the students hold mixed functions of a social nature. Nor do Europeans and non-Europeans play in the same sports teams. The *mores* of the people are against it. There is no difference between English and Afrikaans speaking sections in regard to the strength of public opinion which maintains this *social* distinction. So strong is this feeling that no university institution which ignored it and merely argued on abstract principles, could survive in South Africa to-day. Such *mores* with their roots so deep in our troubled history are not easily changed.

Thus the University of Natal which has by far the largest non-European group to deal with, makes provision for a separate Students Representative Council to manage all the non-European students' social activities, and through which they can have direct access to the Principal without having to go through a European Students' Representative Council, where they may be in a hopeless minority, and where it is possible that they may not be very sympathetically treated. Student bodies are notoriously fickle and easily swayed on issues where sentiment is involved. At the same time there is a Joint Board of Representatives of the European and non-European Students' Representative Councils, where matters affecting the whole student body may be dealt with.

Then, lastly, we have in the fourth category those universities (Pretoria and Stellenbosch) and the colleges of the Orange Free State, Potchefstroom and Rhodes, which do not take any non-European students.

Every effort is made in South African universities which cater

for non-European students, to ensure that, though their fees are lower, the non-Europeans are not fobbed off with an inferior type of university education.

The majority of the non-European students in Natal are Indians, who are eager to avail themselves of these facilities. In fact, to-day one out of every 800 of the Indian population goes to University in South Africa, compared with one out of every 3,000 in India. The wealthy Indians of Natal have not made any donations of importance to the University, where a score of Indians receive degrees each year.

It is the presence of millions of Bantu (Africans) in the immediate vicinity of Durban—the most densely populated area in the Union—who need their own doctors, teachers, veterinarians, agricultural experts and administrators, that has led the Government to set aside nearly 100 acres of land in Durban in order to enable the University of Natal to provide for the rapidly expanding educational needs of these people. Here the non-European students will have their own residences, sports fields and students' organisations in which they can learn to develop leadership among their own kind, instead of being relegated to a position of social inferiority in a European student body.

An important part of this scheme will be a medical school primarily for non-Europeans. Durban has unequalled clinical facilities for such training, and for research into tropical diseases which are so rife in Africa and are generally aggravated by malnutrition. I say " primarily for non-Europeans " because, if there should be Europeans who would wish to prepare themselves more effectively for working among and with the non-Europeans, e.g., missionaries, they would not be refused admission.

Within the South African context the Natal experiment seems to avoid most of the weaknesses of the " mixed " university on the one hand, and of a completely segregated " nigger " university on the other. Admittedly it is not perfect. We can only go forward in faith on the ground that it aims at equity and provides a practical solution for the present and the future as far as we can see ahead. What the distant future holds in store for this multi-racial land of ours, we cannot foresee.

HALLS OF RESIDENCE IN UNIVERSITIES*

By John Murray

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Within the general economy of the university a Hall is to be regarded not as a convenience or a makeshift, but as an end in itself. There are, of course, Halls and Halls, and it may be so always. Half-measures, compromise, the force of accident, indeed a whole range of limiting and distorting circumstances, have gone to the making of some Halls. These circumstances would have told less if there had been any accepted theory or philosophy of Halls. There has hardly as yet been time for a philosophy to take shape: the experimentation is still recent and on a small scale. The needs of the modern institutions are very distinctive, and the prestige of Oxford and Cambridge has prompted much hasty acceptance of their peculiar methods, e.g., in respect of building lay-out, character of accommodation, number of inmates, control, etc. Oxford and Cambridge have promulgated an ideal. What follows here, however, is based on the belief that the modern universities, in adopting the idea of residence, must find the modalities of the idea best suited to themselves.

Moral and Social Influences of a Hall

A Hall may be described as an academic community in which certain moral and social influences are focussed. To learn how to live and work in the community style is an inherent part of education. A Hall should be such that its inmates feel and respond to its unity. There must be atmosphere, habits, rules, and a high measure of autonomy and self-sufficiency. Without a sense of identity and pervading standards a Hall would be, in effect, a boarding-house or hotel. As such it might be comfortable and sociable, and not unsatisfying and useful up to a point, but it would not be a Hall. The authority, the spirit, and the social methods which a Hall needs go far beyond what suffices for the commercial styles of housing numbers together.

* This article was prepared as a memorandum for Mr. T. M. Owen, Registrar of the Canberra University College. It is published here to supplement the article by Mr. J. W. L. Adams, on "Halls of Residence" which appeared in the *Universities Quarterly*, May, 1948, pp. 239ff.

Designing of Halls

If the aim of a Hall, put in the barest terms, is to house students, the first temptation is to ask how this can be done most simply and most economically. The answers, given without subtlety or sympathy, stand embodied in the stone and lime of many existing Halls. Their institutional plan and their large size, adopted in deference to over-ruling considerations of economy in initial costs and in yearly running, would suit equally well for a variety of other institutional purposes, or rather would suit them better. The architect summoned to design a Hall tends, unless strictly supervised, to produce just another institution of the sort he is accustomed to erect. But a university Hall is a very special case. The institutional style is here the bugbear, though it cannot, even with the best will, be kept out completely. A Hall bears an analogy to a home rather than to an institution. The analogy of a home involves restrictions of size and the requirement of social standards and methods of a different sort. Exeter experience strongly favours a maximum of between 60 and 70 students, though not as an ideal, but as the furthest it would go to meet the pressure for cheap running through large numbers. Various of the Exeter Halls started small, with 25 or 30 or 35 inmates, and only by degrees reached the standard size of 60 to 70. On the small early scale the Halls easily developed a high degree of community atmosphere and habit, and have kept it in their later growth. Exeter owes much to the happy accident of the small beginnings—the accident, to be frank, of poverty, and no merit of policy.

The best Exeter results, in respect of the focussing of moral and social influences, have been got in fine old houses built in ampler days for family use, and unmistakably homes. To these have been added ranges of study bedrooms, extra public rooms, and up-to-date kitchens and domestic offices to meet specific Hall needs on the right scale. During and since the war five such houses have been bought, their present capacity being 20 to 30 students each. As and when building becomes practicable, they will be enlarged up to the standard. All five stand in old grounds of 10 to 20 acres with fine trees, lawns, paddocks, kitchen-gardens and orchards. The garden produce is used on the spot. The core of the residential advantage of these old houses is the character of the main group of public rooms—their shaping, placing and furnishing. This feature of these old houses can readily be reproduced in a new

ad hoc Hall. But even the right rooms arranged in adequate numbers on a good scheme need to be furnished carefully to ensure the true home-like effect. The institutional style of furnishing besets large public rooms everywhere. The accident of poverty drove Exeter to the use of second-hand Victorian furniture, mostly mahogany. Policy led it to prefer good secondhand turkey-carpets: they bear the heaviest wear, the silent tread tends to refine students, or some of them, and good carpeting by itself largely solves the problem of furnishing any room. The public rooms, unless care is taken, may be too few and too uniform. A Hall of 60 to 70 students should have at least one large library reading-room, a large general common-room, another common-room, and three or four smaller common-rooms, as well as specific music and individual music-practice rooms, a games room and a large box-room. The last few should be placed apart, e.g., in a basement or an annexe. In Exeter experience the happiest of the main common-rooms are of the longish gallery-like shape. For students the large square or nearly square rooms are not socially "conducive," which sounds arbitrary but appears to be true.

A few other material points deserve mention. On each study-bedroom floor—presumably there will be no study-bedrooms, and no room for any, on the ground floor—all sanitation (baths, showers, lavatories, W.C.'s) should be concentrated and shut off at the back of the building, or in a separate wing or wings. The students, of course, will profit by this: and so will the college by being able with complete convenience to house vacation parties which include both sexes. These vacation influxes, now so common in England, are not likely to spare Canberra. It is roundly true that the vacation balances from such parties in the last 15 or 20 years have very largely furnished the Exeter Halls. All corridors and staircases should be heavily carpeted for silence' sake. Doors should be made anti-slam. Good cloakroom accommodation should be provided in all Halls for visitors of both sexes.

The Warden

The prime requisite in a Hall, after all, is a good warden. Some men and some women have the pastoral gift, but they are few. Not all of them have the gift in the form that suits the student age of, say, 17 to 22. And for a Hall the warden must be sought in the narrow field of the academic staff. The gift is sometimes hidden.

Eager candidates for wardenships are to be scrutinised with extreme care: among the doubting and hesitating there may be better material. The warden, male or female, who is not on the academic staff is not sure of the full respect of students, and his or her Hall tends to fall away from the academic to the boarding-house atmosphere. The full-time warden is apt to magnify his post. His zeal prompts him to force himself on the students, to the point of hunting and harassing them. A good warden can manage his or her academic work, being let off, perhaps, a little of it, and concurrently run a Hall of 60 to 70. Of the eight Exeter wardens one, an educated woman and a scientist, is not on the teaching staff. One in eight can be carried. Exeter would hesitate at raising the ratio to a quarter.

The warden should have free keep and good quarters for all terms, and as much of the vacations as he or she cares to spend in the Hall. The cash salary should be small, or even nominal, at least at the start—enough to signalise the post, but not enough to attract adventurers. The nomination to wardenships should be a prerogative of the head of the college; it would be deplorable if these posts become the prize of canvassing or intrigue among the staff or the lay members of committees. It is implied in this that the head should be genuinely interested in residence, and continuously active in its problems and control, and should keep his eye on the academic staff for signs of warden quality. These matters are essential for the success of residence. And by implication the head of the college should have a special formal responsibility for Halls, either in his sole person, at least at the start, or as chairman of a committee for Halls, which he should gather around him. Only an assiduous enthusiasm properly empowered can make a success of residence.

Responsibility and Authority of the Warden

The responsibility and authority of the warden is to be emphasised at all points. On the domestic side a matron, who should be a person of good class and well educated, if possible, and not a servant, would work under him. On the side of the students, he will require the help of a committee of about five, elected by the students. He will depute freely, but at risk, of course, to the committee. A practised warden who is building up a good tradition of self-government of students by students under his eye, and within the limits will find it possible to divest himself in ordinary working of duties,

jobs, etc., to a surprising extent. But he must step in at a crisis, real or seeming. Both sides must understand that the commitee is there not to run the Hall, but to help the warden to run it. The warden will have to take the lead in framing or revising the Hall regulations and in handling the more serious breaches. In all Hall problems, whether of discipline or otherwise, he must have the freest resort to the head, and the moral certainty of support. Any person fit enough to have been made a warden is more likely to be right in a controversy than the committee or the private members of the Hall. Exeter experience is decidedly against the appointment of sub-wardens or assistant-wardens. Wardens dislike the presence of rivals near the throne, and the best wardens dislike it most. The college has everything to gain by concentrating the responsibility and the " limelight " on the warden. Nor should his difficult task be complicated by the presence in the house as lodgers of other members of the staff, and certainly not at the start. At no time should such housemates be imposed on him *ab extra*, or even permitted to him at his wish without very careful consideration. Life in Hall, free from all domestic cares, readily attracts academic staff, and most the less independent and the shiftless. Their presence moreover, may divert the warden's thoughts and energies from his proper charge, the students. That a member of the staff is anxious to be allowed to live in a Hall is probably a sufficient reason for exclusion. The idea that academic staff have a right to live in a students' Hall should be ruled out expressly from the start.

The warden of a men's Hall should be a generation senior to his charges, old enough to be fatherly, but not of an age or nature to have lost touch with youth. A women's warden might be ripe younger, say by thirty. For men's Halls it is necessary to contemplate appointing married wardens: a well-married warden with a wife of social capabilities might well be preferable to a bachelor. Whether the married quarters should be provided inside the Hall or immediately adjacent, with covered access, is perhaps a question. I prefer the latter way. The warden would still have his official room or rooms in the main building, accessible to all students. This room should be furnished in a dignified personal style without any suggestion of the institutional.

Hospitality and Entertainment

It falls to the warden to dispense hospitality for the college. By

methodical invitations the academic staff, the lay members of college committees, and others can be very advantageously drawn together. Persons of interest, whether residents or strangers, are obvious guests, and should be given the opportunity of contact with the students in common-room conversation and by giving addresses. The entertaining of outside students by the Hall as a whole or by individuals, i.e., at the main corporate meals or more privately, needs careful planning. It should take place exclusively in the public rooms of the Hall, and expressly so with guests of the other sex. Most of it would naturally take place in the main dining-room. For smaller and more private occasions, the three or four smaller common rooms mentioned above would be available. These are all matters for rationing. The coming and going of guests on a large and undefined scale would take away from the character of a Hall, and would assimilate it to a hotel. No inmate can be given an unlimited right to entertain. The rationing scheme and the allowing of exceptions in excess of it are matters for the warden.

The Autonomy of a Hall

The autonomy of a Hall should include its housekeeping, cooking, catering, and the full control of domestic and garden staff. A Hall should stand in its own grounds of ten or fifteen acres of a rural and sylvan aspect, and should be screened by belts of trees, so as to ensure a home-like intimacy and apartness. The urbanised Hall is a sin against youth. A Hall should have two or three tennis courts within its own grounds, and perhaps some facilities as well for games that in general are the affair of the college as a whole.

Residence Policy

The first requisite of a residence policy is caution. It is easy to go wrong in the siting, architecture, furnishing, and operating of a Hall. Unless the policy can be carried out with a sincere and severe eye on the true ideal, and unless it can be carried to its due proportions in the economy of the college as a whole, it might be as well not to embark on it. An inferior or bad Hall is worse than no Hall at all. A scheme of residence that houses only a fraction of the students divides the college. This division can have awkward and even distressing effects. Residence, if it is to yield the best all-round results, needs to be the majority mode. The disadvantage for Exeter students of being excluded from residence in the Halls led the Exeter City Council to institute grants to enable the sons and

daughters of citizens to join the Halls. Where residence is the growing mode, the non-residential students feel themselves increasingly to be " outsiders " in the college.

It is the experience of Exeter that women students appreciate the lay-out and furnishing and atmosphere of Halls better than the men, at any rate in the earlier years of their course. And naturally, for women at the university-entry age of 18, and throughout the university years, are more mature than men in certain relevant ways by two years or three. In response to this difference the college has spent more thought, and also more money, on the women's Halls than on the men's. The superior refinement of the women's Halls is certainly not lost on the men. It is not lost either on the public, and especially the mothers, who send daughters to Exeter. The interests of all parties appear to coincide in a special degree of solicitude for the women students.

If a one-Hall start is intended, it should be, in my opinion, a women's Hall of 60 to 70. It would be better, of course, to begin with two Halls, one for each sex. Where the campus is large, the men's Halls and the women's should be grouped at some considerable distance from each other, although, whatever the distance, the inmates will quickly find the way to each other. But each sex needs privacy as a basis, and the women very markedly need it, and in general like to have their Halls to themselves, and not overlooked by any others. Privacy, indeed, is a tender point of residential policy, and especially for women. The normal provision, both for men and women, should be a study-bedroom apiece. A proportion of men and a smaller proportion of women prefer to share, at least for a period, usually in the freshmen year. The preference need not be ignored. It would be simple to include in a Hall a small minority of double rooms. Women, again, require facilities for laundry (washing, drying, ironing) and for making tea, and a women's Hall should include generous provision of this sort. A more intimate point: the wash-basins in the sanitation block of a women's Hall should be cubicled.

Economy in Construction

I have urged caution in residence policy, and I wish to urge economy in certain points, though not merely for the sake of saving money. Palatial plans for residence are being canvassed in some English universities. I believe it to be desirable in the building

schemes of universities to build some things finely in permanent style, but also some in light construction. The presence of makeshift and temporary elements in a general scheme of lasting quality is sobering and corrective for the young. In 1925 a large mansion, now Reed Hall for men, was given to the college. In the first war it was a military hospital, and in 1915 a large wooden hut was added to it. The hut became the dining-room of the Hall, and looks like lasting many more years. This accident turned into a college policy: various Halls have been provided since then with dining-huts. Thus money is saved, and a lesson is taught. But the idea, derived from Oxford and Cambridge, that lordly dining-halls are essential to colleges still prevails in many circles. That the members of a Hall should eat their meals together, meals cooked in the hall kitchen, is beyond doubt an essential. But it can be done, profitably enough, in some sort of hut.

Disciplinary Value in a Hall

Lastly, and very important, the residential plan must be accepted as hierarchical. There must be seniors and juniors and in-betweens. The very possibility of disciplinary value and of a real unity rests on the admission of these differences. It is not in the nature of a Hall that students should come and go arbitrarily by the month or the term or the year. The worth of the academic community depends on its members staying for a due period. That is a minimum of three years: a first year as a freshman and a nobody, a last year as a senior and a somebody, and a year or more, of waiting and watching between. This sort of living together has, emphatically, its period. Transients build up no Halls. In the first years of a Hall's existence, i.e., until the senior third would automatically make way for the freshman third, the choice of inmates of the different years would be a matter for the warden, in consultation with the head.

But the hardest of all is finding good wardens.

AMERICAN UNIVERSITIES
Some Impressions and Reflections*

By Max Beloff

Reader in the Comparative Study of Institutions, Oxford

It is, or should be, platitudinous to say that the more we expand higher education in this country, the more relevant American experience becomes. With secondary education, quasi-universal in the more advanced States, and with a student body in institutions of higher education numbering some two-and-a-half millions, the United States has come nearer applying the basic concepts of democracy to the field of education than any other comparable society. Since there would appear no impediment other than poverty to a continuation of the same process on this side of the Atlantic, it cannot be doubted that we can learn from what has been done in the United States something at least of what this implies both for good and for evil. On the whole, it looks as though knowledge of the American system is becoming fairly widespread in this country, thanks largely to the generosity of the great American Foundations and of some of the major universities in inviting British scholars and teachers into their midst. It is now, indeed, probably much more widespread than is knowledge of the British system and of current developments, among American university teachers—apart from the leaven of fairly recent Rhodes Scholars. But the subject is perhaps important enough for any additional testimony to be worth placing before those now engaged here in planning for the future.

Basis of the Impression

For one thing, the American fiêld is so much wider and more varied than the British one, that any single observer or number of observers may well miss important points. I should therefore make it clear that what follows is based upon what I saw or heard discussed during a six months visit to America in 1948, at the invitation of the Rockefeller Foundation. The universities which I visited were Columbia, Chicago, Harvard and Wisconsin, and very briefly the University of Virginia, Yale, Northwestern, and the University of

* A series of articles by American authorities on higher education (liberal arts colleges and graduate schools) in the United States appeared in the *Universities Quarterly*, November, 1948.

Illinois. In addition, I spent nearly the whole of the summer term (what we would call the long vacation term) at the University of Minnesota. Since summer term courses are largely taught by people brought in from other Universities this was helpful in enlarging my frame of reference; and I was also helped by seeing a little of the University of Manitoba, and of the University of Toronto during the Canadian part of my journey. What impressions I have are therefore very largely based on the picture presented by the older universities of the North-East and by the great State universities of the Mid-West.

Another point to remember in judging anyone's observations is that the extreme specialisation of subject that is so significant in the organisation and teaching sides of the university tends to be reflected in its whole intellectual life, and even to some extent in its social life; nor of course would I claim that anyone can find out much of value about studies outside his own field, except in the most general way. The work I saw was almost exclusively that of departments of history and political science—the latter subject being much more prominent in American universities than it is in any British university except Oxford and the London School of Economics. I also saw something of the planning and working of regional studies—a developing feature in a number of institutions—more especially of Russian and American studies. The latter of course involves everywhere the co-operation of the departments of English and philosophy. At the University of Minnesota—an important pioneer in "American studies"—the prime impetus appears to come from the department of English, and one of its members is to be the first editor of the new *Journal of American Studies*, whose first appearance early in 1949 may be said to mark the acceptance of American studies among the accepted disciplines.

Discussion of Curriculum and Organisation

The most lasting impression is probably the extreme self-consciousness that most universities are showing about their own work and aspirations and the amount of discussion and writing on questions of curriculum and organisation. There is also a great deal more experimentation; and with a much weaker hold on the part of traditional subjects and of the vested interests bound up with them, there is a much readier willingness to try to meet new demands. The fact that financial resources are so much greater is,

of course, important; and high building costs do not seem to be holding up the expansion of physical plant which is already on a much more lavish scale than anything that we can show here in the newer universities. But it would be a mistake to regard money, and the ability to build as the whole explanation.

In this country we have been talking of expanding Russian studies ever since, in June 1941, someone suddenly noticed the existence of the U.S.S.R. We have had the Scarbrough report—government finance is available—but what has actually been done can hardly compare with the resources that a single university—Columbia—has built up and put into full operation over the same period. There is nothing here as bold in conception as the Harvard Russian Research centre, while at Yale and at some of the west coast universities existing facilities have been or are being added to with vigour and skill. Anyone whose interests lie in fields such as this, is bound to be at once impressed, and envious.

On the other hand, when it comes to thinking about the more general problems of university education, there does seem a certain lack of boldness—from which only a few radicals such as Chancellor Hutchins of the University of Chicago are wholly exempt. This is particularly true perhaps, of the great State universities, and not unnaturally so in view of their very direct responsibility to the State Legislatures and Governors, and hence to the State's taxpayers at large. They seem to be bound to accept certain presuppositions that do handicap a real reconsideration of the university's function and of its power to fulfil it. These presuppositions are partly of a political and partly of a psychological nature.

Political Presuppositions

The main political presupposition would appear to be that every young person has a right to higher education irrespective of ability or previous training. Thus the State universities cannot set up genuine admission standards, and are pretty well bound to accept candidates for admission where their own state is concerned. This means that undergraduate instruction is bound to start at a very low level, and to be carried on at a pace suited to the slower entrants, and by methods that involve an amount of testing and control more appropriate to earlier stages of instruction. In fact, even so, a large proportion of entrants particularly on the arts side tend to drop out before the end of the degree course, so that a teacher

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facing a class of freshmen is bound to be affected by the knowledge that a high proportion of them will never go on to a degree, or to serious academic work, and to treat his assignment with a certain inevitable degree of cynicism. Whatever may be done over here to lower the costs to the individual student, and hence to make access to a university education wholly dependent on factors other than parental incomes, it does seem desirable that the universities should retain untrammelled control over entries, and that provision for those not qualified to benefit by a full university education should be along quite different lines. A first impression is certainly, that the United States would benefit from a smaller student population, and a more vigorous adult education movement.

Psychological Presuppositions

On the whole, however, the psychological presuppositions are more important than the political ones. The Americans seem to have committed themselves to the view that school is primarily a place for integrating the individual child into community life, and only to a secondary extent a place for imparting information. Thus the years of life when the memory is at its most active and the ability to do sustained intellectual work with the minimum of boredom probably at its highest, the years between fifteen and eighteen, are largely wasted, and a great deal of what could profitably be done at school is left to be done in college. This tendency, not unknown here, to make education " easy," and to teach only " interesting " subjects is something to be guarded against, if American experience is valid and it was significant that one found students themselves expressing awareness of the time they had wasted, and could now only recover at the expense of more proper university studies. One obvious example of this is in languages. It looks as though modern languages in America are in danger of following the dead languages into total neglect except for a few specialists; nor do the consequences of this appear fully to be realised. After their nineteenth century tendency to seek inspiration from the continent of Europe and particularly from Germany, a certain insularity seems to have descended upon American universities. It is arguable that both the growth of " American " studies and the comparative neglect of European history are symptomatic in this respect. It is not easy to see who are to be the successors of men like C. H. Haskins or R. B. Merriman.

Scientists assert that fundamental training in basic fields like chemistry is also badly neglected. Here (and probably in other fields) the blame probably lies at least in part, with the powerful departments of education which have managed to gain far too many converts to the idea that so-called " teaching methods " are more important for a would-be teacher than knowledge of the subject he is going to teach. It is certainly true that far too much time is spent on such matters, and with British universities getting increasing responsibility for the training of teachers, it is important (if the American example is of value and statements made to me are correct) to see that this does not mean the undue exaltation of departments of education.

Methods of Teaching and Study

At all events, the concentration on educational psychology and educational method has so far produced very little that seems either valuable or healthy. For the habits of spoon-feeding that the schoolchild acquires are not easily abandoned at the college level. Instruction by lecture and random discussion with the reading of prescribed passages from prescribed textbooks, the whole tested by examinations largely factual in character (and not always marked by the responsible teacher) are hardly the way to encourage either independence of mind or maturity of judgment. The prevailing notion that the United States is a highly individualistic and competitive society scarcely holds good at the campus level, whatever may be true in the world outside. Few who have taught under both systems seem to doubt that the weekly essay for a tutor combined with free access to a library, and with the object in view, a comprehensive examination at some distant date, brings more out of the student than the opposing system, despite all the devotion and ingenuity put into the designing and preparing of courses.

It has been a proud boast of the American system—though economic conditions are making it less true—that the student who had no other resources could always " work his way through college " by taking jobs of one kind and another in the vacation. Few appear to have seen the implication of this, that university work was something that could be attended to in term time, and neglected in vacation, rather than a continuous effort at self-education of which the term-time stimulus of lectures and written work was only part. The idea of schooldays and holidays as contrasted is carried forward

again from school to college. Even more surprisingly this delayed intellectual adolescence is prolonged past the B.A. degree into the post-graduate level of study. The Ph.D. degree has become, of course, the sine qua non of academic status as has the M.A. of promotion in school-teaching, with the consequence of lowering the level of the A.B.(B.A.), and now it appears of altering the character of the "advanced" degree itself. For whereas the English student taking a D.Phil. is left on the whole, to make the best of some individual piece of research with such advice and encouragement as his instructor may see fit to give, the American student has a great part of his time still taken up with courses and "quizzes," with the result that the thesis, which should be central, is all too likely to be a hurried and mechanical production. This method produces more Ph.D.'s—but the amount of criticism of the Ph.D. in the United States suggests that it does not produce more scholars.

The Influence of Numbers

The usual reason put forward to account for these teaching methods is that no others are suitable for the numbers involved. Thus it is again implied that the total number of students is more important than the quality of the work done. It may be hazarded furthermore that the large staffs that each department is even so bound to maintain are probably more numerous than would be available under a more discriminating method of selecting individual aptitudes for independent academic achievement. No one could fail to admire the real devotion to duty that American university teachers display; but one could wish to see them freer to range outside the bounds of prescribed courses and narrowly defined "research." The fact that the rise in the cost of living has meant for so many of them, teaching in summer sessions as a method of making ends meet, means a whole year devoted to the full academic routine and a consequent danger of staleness. Fewer and better paid university professors, even if it meant fewer students, would from the point of view of the community as a whole probably be rewarding.

Emphasis on the Practical

But deeper and more permanent ways of thought probably underlie some of these phenomena. Although there has been a reaction against "electives," and against the notion that all "subjects"

are born free and equal and deserve roughly the same credits in the accumulation of these required for a degree, there is still a deep seated notion that the utility of an academic course lies in what is learned. This makes comprehensive courses and textbooks necessary, because with any other system some bit of knowledge might get "left out." It also means that since it is "knowledge" which is valued, there is a premium on knowledge of "practical" importance. The most obvious criticism of the American educational system is that Jacksonian egalitarianism has overlaid the original Jeffersonian conception of a ladder of advancement open to the intellectual élite. But even the Jeffersonians were to some extent the victims of a utilitarian fallacy. This has been brilliantly expounded in a recent work "The Lost World of Thomas Jefferson," by Daniel Boorstin, one of the group of scholars at the University of Chicago who are, under the title of the Committee on Social Thought, trying to break away from the domination of the "subject" division in higher education. "For all his vigorous advocacy of education," writes Mr. Boorstin, "the Jeffersonian showed little interest in its effect on the educated person. Enrichment of one's inward life or enlarging of private consciousness were held of little account compared with utility against the obstacles of environment and against the ambition and avarice of one's fellow creatures." And again: "The Jeffersonian approach to education encouraged a preoccupation with curriculum which has not yet disappeared from American educational thought."

Thus the basic idea of the Honours degree as known in England, the idea that to learn to handle an important body of matter in any one of the great fields of human learning is itself the best form of higher education and the best preparation either for professional work, or for independent research, is almost everywhere ignored. Indeed, most American teachers seemed convinced that the weakness of their system was that it pushed specialisation too far, while from the British point of view, the lack of specialisation and the tendency towards breadth rather than depth are much more obvious.

General Education

It is in this context that one learns to place what is probably the most interesting of current trends in American universities—the quest for "general education." Its history, motivating forces and objectives have been amply set out in a growing literature, and

presented to British teachers in Professor Kandel's article," General Education " in *The Universities Review* (September, 1948).

No one can dispute the cultural gap created by a body of knowledge accepted as a foundation for all educated men. Recent emphasis has tended to be on the necessity for students in the humanities and social sciences to have some grasp of the physical sciences. The political adventures of some British scientists (this may be less true in the United States) suggest that the reverse is even more to the point. What does seem disputable, and too readily accepted by Americans, is that this can best be done by designing a comprehensive curriculum at the university level making positive and equivalent demands in all three of the main branches of knowledge, and their principal subdivisions. Since so much American college work is anyhow of a propædeutic nature, and since serious academic work so often only starts after the first degree, the case for treating it in this way may be stronger in the United States than it is here, where the B.A.(Hons.) seems likely to remain the real centre-piece of the university and a good " class," a greater distinction than any number of additional letters after one's name.

At Columbia, a pioneer in this field, valuable results seem to have been achieved; but even a cursory view of the handling of the " Contemporary Civilization " course shows how much it depends on really able teaching in comparatively small groups, and how easily it could degenerate into a superficial acquaintance with bits of books and bits of knowledge, and with second-hand ideas. Indeed there is evidence that at colleges less well endowed than is Columbia, and with a less highly selected student body, such courses can come to emphase the " contemporary " more and more at the expense of the " civilization."

Conspectus of Knowledge or Intellectual Training

Such attempts at giving a broad conspectus of human knowledge may all too easily degenerate into sheer eclecticism, and since in each branch the student can only afford the time to get up to the point where the real difficulties of the subject begin, it is difficult to see where he can get that training in hard intellectual endeavour which must come in at some point of any higher education worthy of the name. It seems surely a more hopeful approach to humanize " political science " with history, and to buttress history with economics and law, to demand for instance, a stiffening of language

in every " regional " study, than to endeavour through a prescribed curriculum to produce a roundly educated man. There is a good deal of experience—especially of war-time experience—that goes to show that despite current educational theory, intellectual training is transferable, and that a good civil servant in an economic ministry or a good intelligence officer, may just as easily prove to be a philosopher or medieval historian, as someone up to date on contemporary economics or contemporary scientific theory. No doubt it would be foolish to try to restore either the classical or the medieval syllabus of learning (though both have their advocates), but the idea that " general education " can now be a substitute for either, does not seem to have been proved by American experience, and is one which we should be well advised to regard with proper scepticism.

The Strength of American Higher Education

It would be a pity to leave the impression that the major lessons that the American system can teach take the shape of warnings, or that the feeling one derives from a stay in an American university is a negative one. One cannot help admiring the strength of the human spirit which still refuses to be organised out of existence, and remains a perennially enquiring one. There is an eagerness to learn and to teach that jungles of red tape cannot strangle. And on the positive side, there is a great deal that the universities are doing that deserves commendation and imitation by us in this country. There is to my mind no question whatever that, in spite of the comparative weakness of the adult education movement, the State universities play a much more pervasive role in the life of their States, than the so-called " civic " universities have done up till now in the life of the English provinces. This is true in the practical field—in agriculture and to some extent in mining and industry—where the universities perform valuable work as centres of technical advance. It is true in government, where departments of political science may be important centres for the working out of constitutional and administrative reforms, and are perhaps none the worse for being slightly geared to press in their favour.

But if one thinks of what the more newly settled parts of the United States most need for a full life, the sense of a joint cultural heritage with the old world, and the conviction that the power of carrying it forward is one of the privileges of the New, it is the cultural role of the universities that is the most striking. It is in

introducing young people from a background dominated by material considerations, and at times almost self-consciously philistine, to literature, to the fine arts and to music, that the universities are performing a role perhaps more valuable than most things that fall within the definition of "curriculum." The missing factor of patronage, without which the arts cannot flourish, is being supplied more and more by the universities with their resident poets and novelists, their resident quartets, their theatres and exhibition halls. It was moving and encouraging to be able in a great university on the banks of the Upper Mississippi, in a part of the country that was on the very frontier of settlement a bare century ago, to watch an enthralled audience of the great-grandsons and great-granddaughters of the pioneers who moulded this midwestern landscape, listening to renderings by the best of Europe's musical exiles of some of the finest and subtlest works in the European musical tradition. If the lights of Europe are finally to go out, the world will not be dark.

With this in mind it is very difficult to justify to American university audiences the continued neglect of American studies in this country. Once again, there has been much talk and many fine words, and little achievement outside one or two centres. It was impossible to say either to Americans or to Canadians, that the British universities honestly regarded them as engaged in the same enterprise and as part of a single realm of letters, or that we considered the history of their countries and a knowledge of their culture and institutions vital for ourselves. Until we can honestly make that claim, the very hospitality that American universities so generously offer the visitor from this country will be received with more than a touch of embarrassment.

NOTE ON THE UNESCO UNIVERSITIES CONFERENCE

By Sir John Medley

Vice-Chancellor, University of Melbourne

In August last there was held at Utrecht what was described by UNESCO, its originator, as a Preparatory Conference of Universities of the World. Its main object was stated to be an exploration of both the practicability and the desirability of convening a larger and more completely representative conference within the next two or three years to discuss problems affecting universities in their international aspect. This rather nebulous vista of the future, and the fact that very short notice was given to member governments by the invitation to nominate representatives, made the experiment one which the organisers regarded with some natural anxiety, and the delegates with a certain amount of initial cynicism. On the whole, however, UNESCO may justly be satisfied with the results. Thirty-three governments sent delegations—including Hungary and Czecho-Slovakia—and, although there was perhaps an undue preponderance of departmental representatives over those who were actively concerned in the working of universities, it was generally agreed when it was all over that as a rehearsal for a larger and more carefully prepared affair the experience had been well worth while.

The full report of the Conference will be available shortly, and it can be left to speak for itself on the details of what was done and what was said. This note can do no more than offer some brief reflections upon four points which are of general interest.

Formalities or Informal Contacts ?

At any large conference, there will be numbers of those who like talk for talk's sake, and believe that the passing of resolutions is equivalent to action. They will be perfectly content with a full programme of formal meetings and the more general the discussion the more effective they will feel. But the real problem confronting the organisers is to reduce formalities as much as possible, and to avoid the over-regimentation of leisure time so as to give as many opportunities as possible for those informal contacts between delegates which are the real stuff of which successful conferences are made.

Our Utrecht programme was a little overloaded. It is not possible to stand up to three sessions in one day, and, though no praise could

possibly do justice to the overwhelming kindness and hospitality of our Dutch hosts, it would have been better to have left more time free from the temptation to embark upon an excursion, to attend a reception, or to indulge in quantities of exquisite food and drink. I personally got far more out of private conversations than full sessions, and I am sure that my experience was the general one. It was, for example, most enlightening to discover that outside the English-speaking world there is very little alarm about the possibility of undue State interferences in academic affairs, and very considerable concern about the implications of accepting funds from industry or private benefaction. It was far more useful to talk privately to delegates from Czecho-Slovakia or Turkey than to listen to the prepared statements which was all that a public discussion could bring out. Let no one think that I am criticising unduly the UNESCO organisation or that I am being discourteous to our hosts. Utrecht was an experiment, and it is important to learn what we can from it.

A Common Language and International Understanding

The second point is that in four out of six sections into which the Conference was divided, it was found possible to conduct discussion almost entirely in English. At plenary sessions, arrangements were made for simultaneous interpretation into English and French. At section meetings this could not be done and an interpreter was provided, but his services were seldom necessary, and the consequent saving of time and temper was enormous. There are two comments worth making. If English can become a *lingua franca*, the greatest single bar to improved international understanding will be removed. I do not know how far it is possible to argue generally from the experience of so specialised a group, but it is interesting to note that I was told by a senior Brazilian delegate that, whereas his generation had all automatically learnt French as their second language at school, his children and their contemporaries were all studying English. The other comment is this. At any international conference where interpreters are necessary the Chairman has an uneviable task. If he tries to resolve tensions by making the right joke at the right moment—the most effective tool in the armoury of most good chairmen—it must needs lose all the spontaneity which is the essence of its use during the process of translation. International conferences are more dependent upon

the chairman's technique than any others for their success. We could not have had a better exponent of this difficult art than Professor Kruyt, our general Chairman. Any advance towards the possibility of a real *lingua franca* must be encouraged in every possible way.

Exchanges of Academic Staff

There was, of course, much talk about exchanges of academic staff as one of the surest means of promoting international understanding. We all agree on the desirability, but somehow very little gets done. Dr. Ifor Evans, who played an outstanding part throughout the proceedings and was the Chairman of Section I on "The Changing Rôle of Universities," summed the matter up when he appealed for less talk and more effort on the part of individual universities to come to agreements with each other in a small way, instead of waiting about for some Foundation or other to produce a large scale scheme. That was a valuable contribution to a subject the discussion of which has often tended to become academic in the worst sense of the word.

There was fairly general agreement that some kind of international organisation of universities could perform a useful function in the general task of promoting understanding, though it was not very apparent from the report of the section which studied the subject how precisely that function could be fulfilled. However, a committee has been appointed which will study the matter further and will reduce this and the other results of the Conference to a form in which they can be submitted to a full Conference of universities of the world to be called at some future date.

Three outstanding impressions remain in my mind. The first is that despite the immense diversity of academic backgrounds our problems are really very much the same everywhere, and nothing but good can come from discussing them. The second is that of gratitude to our Dutch hosts and admiration for the way in which they are recovering from war. And the third is that we must all support UNESCO; an organisation which has the imagination to sponsor and carry through the Utrecht Conference deserves well of universities. It is easy to be cynical about it, but it may well be fatal to allow cynicism to dictate inertia.

THE RELEVANCE OF SOCIOLOGY

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The study of social behaviour is finally showing signs of emerging from the stage of uncontrolled speculation about casually observed events and equally uncontrolled and undiscriminating fact-gathering, into a stage in which the general outlines of a systematic empirical science become visible. This emerging analysis of human behaviour has no agreed-on name. It is not identical with what is being taught under the name of Sociology in British and American universities. It represents a trend which is very powerful in Sociology, Social Anthropology and Psychology, and it draws support from Education, Psychiatry, Economics and Political Science. The name, however, is less important than the fact that an important set of problems is being defined and techniques for ascertaining answers to them in a reliable way are being developed. The new view has not yet developed into a systematic theory although the general principles of interpretation which will constitute such a theory are already at hand. There is still very much theoretical incoherence in the work being done by workers in this field, but here too, as research develops, hypotheses become clarified and their systematic interconnection becomes somewhat more perceptible. In this article we shall consider the relevance to social life and policy of one of the main contributory sources of the newly emerging unified science of social behaviour, namely Sociology itself—understanding by Sociology, what is taught in Departments of Sociology in British and especially American universities.

The Problem of Sociology

The problem of Sociology has come to be defined in a most general form as the determination of the conditions under which groups and structures are formed, maintained and dissolved, i.e., the conditions of order and disorder in social structures. The groups range from the smallest face-to-face primary groups to the great collectivities extending up to and beyond national boundaries. The structures include the open and unorganized as well as the closed corporate type. The conditions under which for

example, families, churches, political parties, religious and political sects come to be and pass away, and the conditions of their internal working, come within the jurisdiction of sociological studies. Sociologists have been led by their preoccupation with these problems to the analysis of the way in which the personality of the constituent individuals affect the working of the groups, and this in turn has fostered a more comprehensive approach, in which intensive psychological analysis and extensive analysis of the structure of the social situation become fused into a more dynamic conception of the working of the social system. This interest has not arisen solely from the great tradition of social and political philosophy which inquired into the nature and conditions of social order, the mutual obligations of ruler and citizen, etc. ; it has also come as a result of field research and a concern with the practical problems of contemporary society.

Sociologists had been doing research in a somewhat random way for several decades before this principle of coherence in their approach began to emerge. They had been studying the pattern of urban society ; they had been describing village communities, small towns, neighbourhoods and great metropolitan centres ; they had studied the internal interdependence of the members of the small groups in clubs and industrial organisations ; the relations between religious, ethnic and cultural groups ; the problems of adjustment to new environments faced by displaced persons, those moving into new communities as immigrants or settlers on housing estates, as colonists, etc. ; they had studied the content and influence of motion picture and wireless broadcasting ; the structure of the family, the relations between parents and children and relations between the family and the wider community the problems of social mobility and class consciousness. In the course of these investigations, techniques of observation were developed, and much concrete descriptive knowledge was accumulated as a result of which men came to have a somewhat more differentiated picture of the conditions under which they are living. It is true that most of these specific investigations had no aim other than concrete local description, and that where they did have a scientifically further aim, their results were far from rigorously conclusive. Yet one cannot study the empirical investigation of sociologists over the past quarter of a century without perceiving that slowly and stumblingly a coherent problem and scheme of analysis is be-

ginning to take form. The problem has its point of departure in the classic problem of political and social philosophy sharpened by its reference to specific institutions and by a richer conceptual apparatus. The technique of observation and the analytical hypotheses represent the innovations and the more these are unified with the central problem, the greater will be the scientific and moral value of sociology.

The Practical Contribution of Sociologists

Despite its deficiencies with respect to the standards of a mature science, Sociology has advanced sufficiently as a means of describing the social world and concretely explaining some aspects of it, so that persons with sociological training and outlook have found increasing scope in bodies, private and public, concerned with making practical decisions.

In Great Britain, men originally trained in Psychiatry and Psychology, adapting their experience under the pressure of the war to the problems of the most efficient use of military personnel, joined their psychological insight with techniques of sociological observation. The results have already become famous as the work of the War Office Selection Boards. These scientific achievements were not done by men who had been trained in their universities in Sociology. In consequence however of their experience they came to recognise the need of supplementing their psychiatric and psychological knowledge by the use of techniques and categories devised by sociologists. The utility of knowledge gained by sociological research also became evident in other phases of the British war effort and it has become even more apparent in the discussion of post war problems.

In the United States where Sociology as a subject of research and university teaching has been much more fully established than in other countries, persons specifically trained in Sociology have found occasion for a wide practical application and wide public acceptance of their contribution to the understanding and solution of practical problems.

Sociologists (and social anthropologists whose training in the analysis of the structure of communities has come more and more to coincide with that given in Departments of Sociology in American universities) have been called into rôles of investigators and consultants on official policy relating to the administration of Japanese

relocation camps, on the planning and administration of new towns, "green belt communities", and new housing estates. Sociologists have also been employed by housing estate authorities to study the factors affecting the formation of neighbourhood solidarity, civic responsibility, etc. (In Great Britain the development of the new towns has required the employment of persons with sociological experience, and these in turn have found in surveying their field of work how necessary the type of knowledge gathered by sociologists in the functioning of informal groups is for the effective execution of their task.) Sociologists have also been used in the United States by the Federal Housing Authority in the design of neighbourhood units and for the prediction of movements of population between town and country and within towns.

In the United States where the racial and cultural heterogeneity of the population provides a background for occasionally intense social conflict, sociologists, who have long been at work in the analysis of the nature and causes of racial and cultural conflict, have found widespread use for their services. In the United States Army during the war, the Research Branch of the Adjutant-General's Office was staffed primarily by sociologists and an eminent sociologist was the chief Advisor of the U.S. Army on race relations problems within the Army. The Research Branch itself conducted a number of important investigations on the incidence, casual factors and means of reducing racial prejudice in the Army. During the war, the Federal Government established in the Department of Justice, the Special War Policies Unit, advisory to the Attorney General, on social tensions which might endanger civil liberties. This unit too was directed by sociologists and largely executed by sociologists. It performed important services in the analysis of situations in which hostility toward minority groups might, if left unchecked, have resulted in local restrictions of the civil liberties of these minorities, and made proposals to the Attorney General for action on these situations. Municipal governments have since the last years of the war established race relations commissions in which the services of sociologists as investigators and advisors on policy have been utilised. In Chicago, Detroit and several other American cities troubled by racial conflicts, the Mayor has regularly consulted with sociologists specialized in the analysis of race relations. In addition to this, in the United States, various civic and religious groups, alarmed at the alleged increase in interracial hostility since

the war, have subsidised research by sociologists working in conjunction with psychiatrists, psychologists and other social scientists, whose points of view converge even though their departmental affiliations do not, to study more intensively the dynamic factors involved in the genesis of anti-negro and anti-jewish sentiments.

Ever since the famous study by the Harvard School of Business Administration on the way in which informal group organisation affects industrial morale and therewith industrial output, social scientists from Sociology, Economics, Psychology and Anthropology Departments, have been collaborating in the study of the factors affecting the formation of primary or informal groups in industrial plants and their effect on labour-management relations, industrial output, etc. Industrial firms have begun to employ sociologists in their personnel departments and a few trade unions have also thought it appropriate to have sociologists in their research departments. Sociologists in the United States also work with psychologists, anthropologists and psychiatrists for private management consultant firms, dealing not only with labour-management relations but with the problems arising from relations within the managerial and supervisory staffs.

In the activity of public opinion polling organisations like the American Institute of Public Opinion, the National Opinion Research Centre, the Fortune Poll and the numerous market research organisations, sociologists have found many opportunities for the use of their skills in devising interview schedules, construction of samples, analysis, etc. The fiasco of the predictions of the polling experts concerning the Presidential election should not be allowed to obscure the importance of the contribution to the development of research techniques made by public opinion studies. Their well-deserved setback will prove to be a stimulus to the improvement of interviewing techniques, analysis and sampling. Some of the most important sociological work in this field was done by the Division of Program Surveys and Planning of the U.S. Department of Agriculture under the direction of Rensis Likert. This organisation was originally created to study farmer's responses to already enacted or prospective legislative programmes, but during the war it was also used to analyse problems of industrial morale in war plants, racial tension and social psychological factors affecting inflationary tendencies in the American economy.

The State Department, the Office of Strategic Services, the Office

of War Information, Military and Naval Intelligence and the intelligence services of the U.S. occupation forces in Germany and Japan have also found sociologists useful in the analysis of public opinion in foreign countries and in the study of politically significant trends in social structure. The political intelligence system for the U.S. Zone of Germany was planned and operated by sociologists. (A sociologically-aided psycho-analyst in the British Army produced the most outstanding analysis of the social structure of the German Army ; his investigation into the relations between family background, personality qualities and political behaviour became the basis for a system of personnel selection in the British zone in Germany—it was later also adopted in the American Zone).

Sociology in American Universities

The first full-fledged Sociology Department in the United States was established in the University of Chicago at the time of its foundation in the 1890's and, since then, every other university in the country has acquired a department, Harvard, Princeton, and California being the last. Departments in most universities have between five and ten teaching members. Sociology is both a subject of undergraduate and post-graduate specialisation. On both levels, there is a pronounced emphasis on the necessity of field work, direct observation, the collection of materials at first hand, and the use of statistical techniques. Naturally, there is much water in the curriculum, especially on the undergraduate level where there is a tendency particularly outside the main centres, to use rather trivial and poorly thought out textbooks and there are wide variations in the degree of sophistication with which the various techniques are taught and practised. And everywhere except perhaps at Harvard, Columbia, and Chicago, the construction of hypotheses and the discriminating selection of problems lag very far behind the techniques of observation and of the processing of data.

Sociology is everywhere regarded as an essential part of undergraduate general education, and in the general education schemes developed at Chicago over the past fifteen years and at Harvard in the past two years, Sociology, incorporated into a more systematic general Social Science Course, plays an important part in the curriculum on a level approximately equivalent to the Intermediate level in Great Britain. In the equivalent of the Finals period, all students specialising in Economics, Political Science, Geography,

Psychology and other special Social Sciences are required, at Chicago for instance, to attend lectures and classes on Sociology as well. At Harvard a courageous step has recently been taken in fusing into a single Department of Social Relations, the Sociology Department, the Social Anthropology Section of the Anthropology Department and the Personality, Clinical and Social Psychology Sections of the Psychology Department. Other universities are moving in the same direction in their teaching arrangements. At the same time the collaboration of sociologists with anthropologists, psychologists, etc., in research institutes and on particular research projects has begun to overcome that barrier to intellectual growth imposed by archaic departmental organization.

Sociology in British Universities

The situation is rather different in Great Britain. It is certainly likely that Sociology, at its present scientific and moral level, has had too much prosperity in the United States—in this country, however, the value of the right kind of Sociology has been far too undervalued. Only two universities have fully established departments of Sociology—one at London, the other at Liverpool—but several other universities are in the process of creating posts in Sociology.

At London, training in sociological research has been almost entirely confined to the post-graduate level. Nevertheless, changes are occurring and there is a tendency to devote more attention to the systematic empirical analysis of contemporary society on the undergraduate level; the sociology department is now conducting a major investigation into social selection and stratification in Great Britain with special reference to the middle classes, the sociological study of political behaviour is getting under way, and a large number of post-graduate students are now working in the field on a wide variety of concrete problems.

At Liverpool there is a vigorous research group directing its attention through first-hand investigation in the field to regional problems of pressing importance such as human factors in town planning, race relations, industrial morale, etc. This research interest also influences sociological teaching in the university which is primarily on the undergraduate level.

The slow rate of development of sociology in British universities is to some extent a result of the recognition that there have hitherto

been few opportunities for employment for sociologists in this country. At the same time, the infrequency of employment opportunities is due to justified scepticism about the usefulness in research or practical capacities of persons who have had only the conventional training in Sociology. Thus, the brilliant work of a sociological character which was done during the war by the Directorate of Army Psychology, the W.O.S.B., etc., was largely improvisation by psychiatrists and psychologists who had to learn their sociology "on the run" since there were not enough British sociologists with whom they could collaborate. Similarly, the supply of high-grade sociologists for university posts has been deficient. In consequence of this situation, the chief stimulus to the construction of the new science of social behaviour is at present coming from psychologists, psychiatrists, anthropologists, and other disciplines which look with sympathy on direct observational procedures in research. Until this situation is remedied, empirical social science in Great Britain will suffer from an inadequately differentiated treatment of large social structures, which the sociologist's experience with modern society might overcome. This situation might be remedied by the development of Social Anthropology to the point where it comprehends within itself what is ordinarily thought to be the sociological analysis of modern large-scale societies. This might have its advantages since Anthropology in this country has an excellent tradition of direct realistic observation in the field, and, among the students and followers of Malinowski and the Oxford school, a definite interest in systematic theory. It might also be remedied by the development of sociological teaching in the universities with a more realistic outlook, so that when post-graduate work is begun, the student who reads Sociology as an under-graduate will be better equipped to undertake research than is now the case. This will involve bringing Sociology in teaching and in research into closer connection with Dynamic Psychology, Political Science, Economics, and Social Anthropology, and a more serious attempt to bring the sociological point of view to bear on the analysis of contemporary social, economic and political problems. It will involve a franker recognition of the fundamental unity of the social sciences and the need for a more explicit unification. Closer relations between sociological research inside and outside the universities seems called for also. The sociological curriculum, especially on the undergraduate level should aim at

stimulating the student's curiosity about the social system and at providing him with principles of interpretation which will guide his observation and reflection. He should come to know enough of research techniques, and their possibilities and limitations so that he can appreciate the nature of the problems which arise when truth is honestly sought. The writings of the great authors of the past should be viewed, not as the body of sociology, but as sources of illuminating general hypotheses which it will be the task of the present and succeeding generations to test, assuming that the hypotheses meet our criteria of relevance. It should not, moreover, be thought that an orientation towards immediate practical problems and an enthusiasm for field work and statistics will alone suffice to enable sociology to overcome its remoteness from reality on the one hand, and its fragmentary and scattered concreteness on the other. If the results of particular investigations are to grow into science, common categories derived from common general problems and hypotheses must exist. These will exist only where the philosophy of science is understood, and where moral seriousness about the large problems of our civilization is to be found. Without moral seriousness, there will be no criteria of relevance or importance to guide our selection of problems, and without these criteria sociology will scatter its attention among numerous concrete investigations which will seldom add up to anything important, either for the guidance of policy or the growth of truth.

But in the last analysis much depends on the attitude of the community and its organs to Sociology. If it is thought that Sociology can be useful to policy and can contribute to human knowledge in a reliable and important way, then sociological research will be supported and the extension and improvement of sociological teaching in the universities will be promoted. For the former condition to be realised, it will be necessary to raise the confidence of those who make policy in the Government and universities in the use of objective methods of examining their own actions and those of the institutions with which they are identified. For the latter the clarification of the theory of Social Science is necessary and that can only be done by the furthering and improvement of research into concrete situations and by the maintenance of a dialectical interplay between general social theory and concrete social research.

SOME IMPRESSIONS OF UNIVERSITY LIFE IN BELGIUM AND HOLLAND

By. L. Rosenfeld

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Leaving aside the traditions from a more remote past, whose influence is hardly noticeable, it may be said that in all essentials the present organisation of both Belgian and Dutch universities dates from a little more than a century ago. At that time it was very similar in the two neighbouring countries, that had only just severed the ill-fated union imposed upon them by the Congress of Vienna. Since, then, however, it has developed along divergent lines and become as different in character as one can imagine. It is not my purpose, in this article, to trace the causes and history of this evolution, but simply to picture as concretely as possible the main features of university life as it is at present in the two countries. In each of them, all universities, whether they depend directly on the State or are controlled by independent bodies, have adopted practically the same pattern of organisation. My account will be based on personal experience in two State universities, Liége and Utrecht, of about equal importance* and quite representative of prevailing conditions.

Preparation for the University†

To be quite specific, let us pick out some student of average ability, and follow him through the arduous course of his university career. Behold him as he passes for the first time, with a feeling of awe and uncertain expectation, the threshold of the university. What is his intellectual background ? How has he been prepared for his new existence ? Without giving some consideration to those questions we cannot form any adequate idea of the problems and difficulties that will soon confront him. Secondary education is conducted on quite similar lines in Belgium and in Holland, so that we can conveniently deal with both countries together.

Our young student would normally be in his eighteenth year, and would have spent six years in one of the three main types of secondary

* Their normal capacity is about 3,000 students ; they are at present overcrowded, with populations around 5,000.

† See Désonay, *Revue Universitaire*, 1947, No. 2; Dhondt, *Alumni*, 1948, pp. 51-76; *Rapport Général sur les Examens de Maturité en Vue de l'Attribution des Prêts d'Etude* published annually by the *Fondation Universitaire*, especially the reports for 1939-40 and 1947-48.

schools, distinguished by varying emphasis on classics, modern languages, and science. Little need be said about the curriculum itself except that up to the highest form it is very full and varied. What he will probably have retained of it is a reasonably sound working knowledge of a few subjects and some inkling of many others; he will not have perceived in it any unity of thought or purpose. But the point to be stressed is that he will have had no possibility of making any choice of subjects according to his tastes; the subjects he had to learn in each form were rigidly fixed by law, and his examination results during the year had to be satisfactory in *all* of them before he could be admitted to the next higher form. There has developed a sort of natural adaptation of teachers and pupils alike to this situation: the former are forced to have recourse more than they would like to mechanical drill and spoon-feeding, and the latter react with an attitude of passive receptivity. The young man entering the university has thus learned to know exactly beforehand what kinds and even what amounts of exertion would be expected of him in all circumstances; he will have acquired a feeling of dull security not in the least justified by his ability, and soon to be shattered at the first contact with real life.

Contact between Students and Professors

There he stands, clumsy and helpless, appallingly ignorant of all matters of serious concern to the adolescent as well as to the citizen; hardly capable of expressing the simplest logical sequence of ideas, still less of taking an independent decision. The constant supervision of the school on which he almost unconsciously used to rely has been suddenly removed, and he is let loose in strange and unfriendly surroundings. On that account, his first experiences at the university are those of an extremely hard and painful effort of adaptation, of a struggle that he has to fight largely alone: in fact, he may easily become one of the many for whom this initial adaptation proves too much, and who soon abandon the university, with a feeling of inferiority and frustration that will perhaps poison the rest of their lives. In this quandary he might be expected to turn for guidance to his professors; but it is not unlikely that he will meet here the bitterest disappointment of his university life.

It is, of course, difficult, in trying to give a sketchy impression of such complex and variegated organisms as universities, to avoid making statements much too sweeping to do justice to this com-

plexity. I am well aware that there are quite a few idyllic nooks (like the Utrecht faculty of science, in which I spent some of the pleasantest years of my academic life) from which the old caste spirit has happily vanished. But I am afraid that on the whole this spirit is still very much alive, and has a more damaging effect than any material defect of organisation on the standard of university education. As matters stand, the only personal contact between the students and professors, at any rate during the first two years, is usually that established across the examination table. In the faculties of science or arts, in which the emphasis is laid on pure research, the relations improve somewhat during the latter part of the course; but in the large schools of engineering, law or medicine, the aloofness of the professors is maintained to the last.

The gravity of this situation is increasingly recognised, especially in Holland, where there is much talk of reviving the medieval *Civitas academica*. I do not think, however, that my Dutch friends are on the right track, because it seems to me that they are a bit too reluctant to expose the real root of the evil. As a matter of fact, the inspiration of the *Civitas academica* movement is extremely reactionary, as much from the students' as from the professors' side. It does not strive to democratise the latter, but to aristocratise the former. It would be quite unfair, however, not to emphasise the positive aspects of this interesting movement; on the one hand, the organisation of series of lectures of a general character accessible to students of all faculties; on the other, the creation of " University houses," providing meeting places for both students and professors. Such a movement at the present time is an indication of the deep unrest and dissatisfaction pervading the academic communities.

In Belgium the same situation has lately given rise to a new departure of a quite different type. The practically-minded and politically progressive students of the University of Brussels have persuaded the faculties of science and engineering to consent to the setting up of joint commissions, composed of equal numbers of professors and students, with a view to studying all questions of organisation of the University.

The Belgian System

The crucial problem of the contact between students and professors, that we have been discussing, is common to Belgian and Dutch universities. We proceed with the consideration of more

technical aspects of the organisation of teaching, which will illustrate the deep-seated differences between the systems adopted in the two countries. It will thus be necessary to take them separately and we shall begin with the situation in Belgium.

The various lines of study at the Belgian universities are as rigidly determined by law as the curricula of secondary education; the only amount of flexibility which such regulations allow lies entirely in the multiplicity of degrees that may be taken. But once the degree aimed at has been decided upon, the way is laid out in all details and no deviation from it is possible. Our young friend will perhaps appreciate this at first as an alleviation of his troubles: he will at any rate not have to bother about selecting the lectures most profitable for his study. But it will probably not be long before he groans under the burden of the work he has to do whether he likes it or not. At the end of the session, there is the terrifying prospect of an examination covering all the subjects taught during the year; he will have to satisfy in *all* of them to pass. If he fails, he will be given another chance two months later; but, even though he had failed in but a single subject, he will then have to undergo the whole ordeal all over again. All examinations are oral; they normally do not exceed an hour each and are mostly conducted as a matter of routine with very little regard to the fact that the candidate is also a human being. Little wonder that excessive importance is attached by the average student to these examinations, which cast their ominous shadow on the whole course of the study; he has not the peace of mind indispensable for serious work, but prefers to rely on memory and drill, not to mention still more doubtful expedients. More often than not, after the harassing experience of the examination, he enters the next stage of his course with a perfectly blank mind; and since he is never invited to give thought to the meaning and gradation of the subjects he is taught, he fails to perceive their mutual interconnexions, and has the impression of drifting along until he leaves the university, just as ill-prepared for life as when he started, and with a bitter sense of frustration.

Of most professors he will retain but a dim and not very friendly remembrance; they will have impressed him chiefly by their various degrees of ferocity at the examinations. Probably they deserve this unpopularity, for they show surprisingly little concern about the shortcomings of the established system. Certainly, there is a lot of talk about the alarming decline of intellectual and moral standards

among the youth, but few are those who recognise the need for a reform of the universities; some even try to put the blame on secondary education, apparently forgetful of the fact that they are responsible for the inadequate training of the school teachers. The stumbling block in the way of any improvement, however, lies in the extremely individualistic position of the university teacher. This, in turn, arises from another administrative mistake: The teaching duties of a professor are much too narrowly limited by the terms of his appointment, which minutely specify with which of the legally prescribed courses of lectures he is entrusted, without any provision for possible adjustments. As a result relations between professors tend to develop on a feudal level. Any suggestion of co-operation is usually looked upon as an encroachment on the jealously guarded domain within which autonomy is confined. A peculiar consequence of this situation is that the most active members of the teaching staff, those from whom the initiative for reform might just be expected to start, lose interest in what they regard as hopeless wrangles, wasteful of time and energy, and prefer to concentrate on research. Hence Belgian universities offer the paradoxical spectacle of a high standard of scientific and scholarly activity flourishing on a thoroughly bad system of education. It is clear, however, that the issue cannot be permanently evaded in this way. Under the present circumstances the selection of research students is indeed unduly wasteful and precarious; one can but admire the enthusiastic young men who contrive to compensate by hard post-graduate study for the deficiencies of their university training. The proud edifice of scientific research is in constant danger of collapsing so long as it is allowed to rest on so fragile a basis.

The Dutch System

A would-be reformer of the Belgian universities would not have to go far to seek inspiration. If he ventured across the Northern border, he would have the opportunity of observing a university system at work from which the glaring defects of the Belgian one are absent. I would not like, however, to draw up a black-and-white contrast between the two. I have emphasised already that the relations between students and professors are just as fundamentally unsound in Holland as in Belgium; more so perhaps, because the Belgian student finds some relief in a sense of humour painfully absent from the Dutch environment. But I must now confine

myself to those essential features of the Dutch university organisation, which are so strikingly in contrast with the Belgian conditions.

In the first place, the student is allowed considerable initiative in the choice of his subjects; the specification of the degree provides only a loose frame, within which the most varied combinations can be fitted. Each student must take a main subject and two subsidiaries; a list of standard combinations of subjects is set up by each faculty and any combination put on this list is automatically approved. But the possibility of unusual combinations, fitting special tastes or circumstances, is left entirely open, each application being judged on its own merits. The inexperienced beginner will perhaps have some difficulty in making the right choice; but should he become dissatisfied with his initial plan, he is always allowed to alter it with a minimum of administrative interference.

This freedom of study is paralleled by an equal freedom of teaching; in fact, the system bears the mark of the old liberal German tradition of *Lehr-und Lernfreiheit*. The professors enjoy the most complete autonomy; they are entirely free to determine the extent and scope of their teaching and to fix the examination requirements in their subject. Except for elementary courses, providing the indispensable foundations, the teaching is usually not intended to be systematic or exhaustive: selected topics, varying from year to year, are treated *ex cathedra*, while much reliance is put on textbook study for rounding off the subject. This system ought to be supplemented by a more careful personal supervision of the students' work than is provided for. But as it is, it undoubtedly fosters their intellectual curiosity, thoroughness, and independence of judgment.

The third characteristic feature of the Dutch system, which is also very important in creating favourable conditions for serious study, is the very liberal disposition of the examinations. In fact, it is doubtful whether the principles of freedom I have tried to outline could be upheld at all, if their working were hampered by too stringent examination rules. The only hindrance noticeable nowadays is the pressure put on many students by economic difficulties; and it can be observed how detrimental is its effect of thwarting this very spirit of freedom in which the study is pursued. As I said above, the regulations are not quite uniform, since each faculty defines them independently within the very flexible framework of the law. I shall briefly describe the procedure followed in the faculties of science, which is perhaps the most liberal of all. Its

most original provision is the system of *tentamens* preceding the *examen* proper; this is a purely autonomous creation of the faculties, not provided for by the law. Whenever a student feels ready to stand the test in any subject, or subdivision of subject (e.g., " differential equations," being part of the subject " mathematics "), he applies privately to the professor for a *tentamen*. This is usually an oral test, lasting for about an hour; in some cases, when large numbers of students are involved, it may be a written examination. If the *tentamen* is satisfactory, a voucher to that effect is signed by the professor and given to the student. If not, no harm is done; the test has disclosed the gaps in the student's knowledge or the defects in his method of work. In the light of this experience, he resumes his study and subsequently has another trial.

Eventually, when he has collected all the vouchers covering the main and subsidiary subjects of his choice, he is in a position to apply for the *examen*, which takes place at the first available opportunity in the presence of at least three members of the faculty; usually an afternoon every week is reserved for this purpose. Except in very doubtful cases, the *examen* actually becomes a formality, carried out mainly in order to comply with the law. It is again an oral test of an hour, but the questions put to the candidate, according to the prevailing tradition, have been agreed upon beforehand; the real test has in fact been the series of *tentamens*, testified by the vouchers. A candidate may have passed some of his *tentamens* at another university; the corresponding vouchers are usually accepted by the professor concerned on the same footing as his own. The only excitement of the ceremony arises in the case of especially brilliant candidates, upon whom the degree may be conferred *cum laude*—a sparingly granted and highly appreciated honour. After the *examen*, a diploma is immediately written up (in Latin) and solemnly handed over to the successful candidate.

If we try, in conclusion, to draw up a short balance sheet of the two systems of higher education we may say that the Dutch system requires from the students a good deal of steadfastness, initiative, and determination; it is very hard on students of weak character and mediocre intelligence. The Belgian system just tends to help the latter on and to inflict frustration on the former. The general cultural level of each country strikingly illustrates the consequences of these opposite tendencies.

THE ITALIAN UNIVERSITIES

By Arthur Vesselo

Formerly Regional Director of Education of the Allied Military Government in Italy

The fundamental law governing the Italian educational system is the Lex Casati of 1859. This was a Piedmontese enactment, embodying the most progressive educational thought of the period, and setting out a comprehensive administrative and academic ordering for schools and universities throughout the Kingdom. It is a brilliant piece of legal engineering, and worthy of a nation which makes law the basic university faculty; though in some respects its monumental thoroughness is a drawback as well as a virtue.

The Lex Casati envisaged a paternal system of State control, as complete as possible, for universities as well as schools: thus university heads (rectors) and also deans of faculties were to be of Crown appointment, and courses of studies were uniformly laid down, while full State-subsidisation was to be the norm. The State's interest in education, it was felt, was too great to be delegated. The number of universities within the territory at the time was only five, so that State control may have appeared a relatively simple matter; but in a short time many other universities were added from the newly-annexed States, and what followed was a progressive administrative and financial overburdening of the central authorities, together with a lowering of standards. Furthermore, the distribution of the new universities was perhaps not all it might have been.

The old pre-unity State Governments in the North had each sought to maintain its own self-subsistent university, in order to prevent the passage of students over the State borders; though they had often had insufficient means to fulfil their task adequately. The result was a concentration of imperfectly distributed universities of differing capabilities in the North, and an almost complete absence of them in the ill-cared-for South.

Despite the emphasis placed by the Lex Casati on State authority (a leaning derived partly, it may well seem, from nearness in time to a despotic reign), the university system—distinct in this from that of the schools—retained more than a trace of the mediæval conception of a university as an individual self-governing entity. For example, the Rector Magnificus, though appointed by the

Crown, was a temporarily-elevated *primus inter pares* from among the particular university's existing teachers, not a life-appointee imposed entirely from without. In the following years this conception made a move to reassert itself more strongly, and the power of the Crown or its Ministers to make appointments without consultation was considerably modified; but the principle of State control remained fixed, and only a very few non-State (*libere*) universities were accepted into the canon: those which were had to conform to the State's regulations in a number of ways.

Overcrowding and Decline in Standards before Fascism

In the post-unity period great argument arose about the maintenance of academic standards in the universities, and a certain vigorous school of thought urged the suppression of "surplus" universities, both in order to raise standards, and also to meet the pressing need for reduction in State expenditure. The answer that was given was that suppression would not in itself necessarily effect a raising of standards, and would certainly lead to overcrowding. Overcrowding was, indeed, already such that in some faculties in the bigger universities lectures were commonly attended by some hundreds of students, and, if all the enrolled students had attended, the halls would have been too small to hold them.

After the first World War, the problem of overcrowding became critical. In 1870–1 the total student-population in universities and parallel higher institutes of special types had been approximately 13,000. In 1914–15 it had risen to 35,685; and in 1919–20 it was 60,993. An important part of this was accounted for by the growth of new higher institutes; but the student-population of the universities alone (17 State universities and 4 non-State, throughout the period) had more than trebled itself.

The Gentile Reform (1923)

One of Mussolini's first actions on coming to power was to order a far-reaching reform of the Italian educational system. This reform was entrusted to the idealist philosopher, Gentile, who devoted himself to it with energy, if with mixed motives and an uncertain eye to practicality. He did not suppress any universities: in fact, he added some new ones on the State side; but he divided the State universities into two types, "A" and "B," the first fully State-supported, the second only partially; and he allotted to both a greater measure of administrative-financial and academic freedom.

Thus the Minister of Education was relieved of a growingly heavy burden of work, the State budget was eased, and indirect pressure was put on some of the minor universities to close down some of their faculties. To balance the increase in *autonomia*, Gentile returned to the simple appointment of rectors by the Crown, and deans of faculties were to be appointed by the Minister and the rector in concert. The Fascist State was thus left with the key still firmly in its hands.

Gentile was anxious to halt the production of graduates in excess of available jobs, with the inevitable growth of unsettlement and agitation among the population. He was also exercised to raise standards in the universities as potential nurturing-grounds of a leader-caste: this idea of a restricted *classe dirigente* has always had wide currency in Italy. He therefore tightened up the qualifying examinations for university entrance, and increased fees. At the same time he endeavoured to enlarge the freedom of university students to choose their own studies, and made an effort to revise the form of internal university examinations. He expressly affirmed the nature of university studies as cultural-scientific, not professional-technical, and as a corollary established post-graduate State examinations for professional posts, instead of continuing the system whereby the degree itself was a professional title.

The Fate of the Gentile Reform

Gentile's efforts, for whatever they may have been worth, were doomed to colossal failure. Some of his reforms (such as the division of universities into " A " and " B " types) eventually died a natural death through their own ineffectiveness; others (such as the tightening-up and revision of examinations) were through popular pressure or vested interest only implemented for a time, or only half-heartedly, or not at all; while others again (such as the granting of a limited autonomy) were overturned by the growing drive of the Fascist State towards political interference and oppressive centralization in all fields. As for his idea of the universities as cultural rather than professional-training agencies, this idea, by the middle 'thirties, had become a complete dead letter. Some of the form might remain (as with the professional examinations), but the purpose remained unfulfilled.

In practice, if not in theory, the counter-revolution had already begun against Gentile's reforms even before he left office, in June,

1924; but the *coup de grâce* was finally given to them by the martinet De Vecchi, when he became Minister of Education in 1935. De Vecchi abolished once for all the distinction between the "A" and "B" universities, which in itself was no loss. At the same time, however, he established a rigid uniformity of studies, gave despotic power to the Minister over appointments, from highest to lowest, and made a by-and-large conversion of specialised higher institutes into constituent faculties of their local universities.

The Universities as Professional-Technical Training Grounds

The general assimilation of higher institutes into the universities was the culmination of a process which had been going on apace for several years, and which meant the explicit professionalisation of the universities, in absolute contradiction to Gentile. It was the kind of process which, once given free scope, is extremely difficult to go back upon, and in that respect it is perhaps ultimately more important than certain Fascist-political interferences which more readily catch the eye. This is not to underrate the pernicious influence of the introduction of Fascist tendentiousness and even purely Fascist studies into the curricula; of the promotion to key teaching and administrative posts of Fascist toadies and placemen; or of the indoctrination of students through every means, in particular through the powerful politico-militaristic Fascist Students' Groups (the *Gruppi Universitari Fascisti*), and through the granting of fee-exemptions and other concessions for political reasons. But the Italians, unlike the Germans, are sceptics and individualists, and these qualities, though they can still easily be turned again to ill purpose by unfavourable post-war conditions, may conceivably have protected them from more than superficial indoctrination in the long run; whereas the effects of over-professionalisation in the universities can go deeper and be more lasting.

The issue is a complex one. Some may hold that the development is natural in modern conditions, and that over-professionalisation is a mere matter of degree, open to adjustment. There need be no attempt to beg any questions here. The basic facts are as follows. The four traditional Italian faculties, retained, without addition to their number, by Gentile, are: law, medicine, sciences (physical, mathematical, natural), and letters and philosophy. The quality of learning in these faculties had been deteriorating before Gentile, and the deterioration continued after and despite him,

university studies of all kinds growing more and more to be considered as simple career-elements for the acquisition of door-opening certificates. By 1933 the four traditional faculties had expanded into eleven, and from De Vecchi onwards there have been fifteen, of which the new ones (in order of size as at 1947) are: economics and commerce, engineering, education, pharmacy, agriculture, veterinary medicine, architecture, political sciences, industrial chemistry, statistical sciences, mining engineering. Thirty-one degrees are available among the fifteen faculties, as well as five diplomas.

At the present day the last three faculties listed are still quite small. Political sciences, predominantly Fascist-propagandist in trend, were for the most part suppressed after the war by Allied Military Government, and what remains of them now is properly an adjunct to economics and commerce. Economics and commerce is a huge faculty, with the bias towards commercial training rather than economic theory. Its standard is low, and its swollen growth in the present century is an adequate reflexion of the Italian tendency to seek university degrees (and naturally the easiest obtainable) simply in order to gain access to the social status of black-coated administrative posts. This tendency was exaggerated by the Fascist inflation of the bureaucratic system; which acted as an open encouragement to those who persisted in regarding the universities as mere diploma factories, while at the same time it never succeeded in swallowing up the vastly increasing supply of graduates.

Expansion of the Student-Population

An indication of the problem's true character appears in the year-by-year enrolment figures in the Italian universities. As has been shown, growth in student-population between 1870 and 1920 was considerably more rapid than the system could properly stand; and one of Gentile's main aims was to stop, and indeed reverse, the process. For a time he seemed to have achieved a measure of success. From over 60,000 (higher institutes included) in 1920 enrolments had fallen back to 40,310 in 1928–29. A part of this fall was due not to Gentile but to natural causes: for example, the tremendous post-war influx had thinned itself down, after a year or two, of its own accord. Nevertheless Gentile's restraints on entry, and so forth, must certainly have helped a good deal to keep numbers down. All the same, the figure remained above that of 1914–15; and after 1929, as Gentile's restraints more and more

disappeared and other influences made themselves felt, the figure began again to shoot up. By 1934–35 it was back to nearly 60,000.

It continued upwards. By 1939–40 it had reached 85,535; and in the next year it took a flying leap up to over 127,000. By 1942–43 the figure was up to nearly 165,000, a terrific total; but as, by now, a large proportion of the students enrolled were serving with the Armed Forces, the problem being prepared was to a great extent a post-war one. Standards, since the outbreak of war, had sunk to nothing. Fee-exemptions were granted for the most irrelevant reasons, examination diplomas were sometimes awarded almost for the asking, and there was no way of stopping the rot. After the Armistice the situation grew worse, not better. As in 1919 there was a great influx of students back from the war; and the academically irrelevant reliefs and exemptions of the Fascist period were replaced, unavoidably, by reliefs and exemptions (too often equally irrelevant from the point of view of academic merit) for all sorts of persons who could claim that their careers had been interfered with by the war. There is an impressive similarity in many ways between the present post-war period and the last; but in 1944 and 1945 there were additional complications that had not existed in 1919 and 1920. Destroyed buildings, great shortages of books, paper and materials, displaced-person problems, and minor upheavals among lecturers and office staffs owing to the flight and dismissal of Fascists, exaggerated teaching and administrative difficulties.

The Present Tendency in Enrolments

The official enrolment figure for 1945–46 was 189,663; for 1946–47 it was 190,861. These fantastic totals do not, however, give the whole story. There are in fact signs that the tide is at last on the turn and that numbers are beginning to decrease again. While first-year enrolments in 1945–46 were 52,746 (as compared with 27,526 in 1939–40 and an annual figure fluctuating round about 51,700 in the three succeeding years), those in 1946–47 were down to 47,768, and it is probable that the current year's figures, when they are published, will show a further descent. Nevertheless, such descents are only incomplete answers to the problem. They have the same purely relative value as comparable variations at the end of the first World War, when three years saw an automatic drop of nearly 20 per cent. in total enrolments. There are severe limits to an automatic readjustment of

this kind. Meanwhile the quantity of students is far beyond the supply of university teachers to cope with them (let alone the supply of suitable posts to absorb them once they have finished their courses). The number of practising *professori ufficiali* (official lecturers, permanent and temporary) in 1946–47 is listed as 3,576, as against 3,557 ten years earlier; whereas the number of students had multiplied in the period by more than two and a half.

Staffs and Appointments

Some practical reorganisation of the system is an obvious and urgent necessity, but it has not yet taken place, though the Italian Government, is understood to have it closely in view. The only university field in which positive steps have already been taken is that of staffs and appointments. During the era of Allied Military Government, political and " racial " bars were removed, Fascist teaching and administrative personnel were suspended (up to about 10 per cent. of the total), and the absolute power of the Minister over appointments was swept away. Rectors and deans of faculties were made elective (on the vote of the permanent staff of the particular university or local faculty), with a three-year tenure of office; and membership of examining commissions for the appointment of permanent university lecturers was also made elective. This last step was a simple reversion to pre-Fascist practice. The present system of appointment to permanent lectureships is on a basis of open competition among qualified persons. Vacancies are publicly advertised, and applicants are judged by a State commission of five, set up by the Minister of Education on the result of a vote by the members of all faculties in the country having the relevant post on their roll. On appointment, there is a three-year probationary period. Under Fascism the principle of open competition was greatly interfered with, until finally it was left for the Minister not only himself to appoint the examining commission but actually, if he thought fit, himself directly to appoint the lecturer, without consultation. Under A.M.G. these powers were countermanded, and all direct appointments already made were subjected to review.

Since the end of A.M.G. many persons suspended on account of Fascist antecedents have been reinstated, some for convincing reasons, some for decidedly weak ones; but otherwise the position remains. The elective principle is now very widely applied, and it is largely on this basis that the Minister of Education's Supreme

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Council, an important policy-making body, is constituted. The Ministry naturally retains control over many matters, particularly concerning curricula; but on general questions of personnel and internal administration, universities have been allowed considerable liberty, and here the Ministry's control is chiefly formal.

Present-Day Problems

Other steps to date have been mainly negative ones, such as the abolition of purely Fascist studies and of the Fascist Students' Groups under A.M.G. The ordering of studies is not fundamentally different from before, and the basic problems of the system are as yet untouched. While there are circumstances in which increases in numbers of university students might be an entirely good thing, this clearly cannot be said of the circumstances obtaining in Italy. " Cramming " is widespread; absenteeism from lectures is a commonplace; university life, as such, among students is in many places non-existent; and individual tuition is as a rule quite impossible. In addition monetary inflation, with its attendant difficulties, has had an unsettling effect on students and teachers alike. A good deal of this is due to the war, and will in time get better; but there is a considerable residue which in the end is simply a part of the latter-day Italian inheritance.

The worst effects are probably felt in the biggest universities. There are to-day 23 State universities and 3 *università libere*, with 11 remaining classifiable higher institutes of special kinds (in 1934 the figures were respectively 21, 5 and 50). The biggest university of all is Rome, with nearly 30,000 students in 1946–47, followed by Naples with nearly 22,000, and 4 others with over 10,000. Twenty years ago there was no Italian university with as many as 5,000 students. In 1939–40 Rome had over 15,000, but there was no other that had yet reached 10,000. It is worth noting that the first-year enrolments for 1946–47, which are generally down, are still on the up-grade in Rome.

Among faculties, economics and commerce, which by 1942–43 actually headed the list, now (with some 30,000 students in 1946–47) takes second place to medicine (with some 35,000). But it still has easily the largest number of first-year enrolments, over 12,000 as against medicine's 5,500. Medicine is a six-year course while economics is a four-year, but economics also loses far more students by the wayside than does medicine. The approximate figure of

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12,000 represents over a quarter of all first-year enrolments for 1946–47. After these two, the biggest faculties are the traditional ones—sciences, law, and letters, in that order. Education follows close behind, and is one of the few faculties which in 1946–47 had more first-year enrolments than in the year before. Sciences include a two-year preliminary engineering course, and if this course is reckoned with engineering, then the latter moves up to a level with law, and sciences fall back to sixth place.

There is nothing to suggest that more than a relatively small percentage of students will eventually find satisfactory posts. Italy to-day is a country of inflation and unemployment, a country whose needs far outstrip her material resources. Of those graduates who may happen to find posts without too much difficulty, many (including those who become secondary-school teachers) will find posts in the ill-paid State service, and will be hard put to it to make ends meet. Many graduates will simply find the competition too much for them. The engineers, for example, may be thinking in terms of the reconstruction work there is to be done; but it is not university graduates that are the crying need, but building materials and cash—and then would come workmen. If Italy can find her economic and political feet in the next year or two, some of this can be remedied; but there is still the hard fact that many students are in the universities merely for the sake of a flimsy prestige, or for lack of somewhere better to go, and their prospects are not bright.

While matters are in the flux they are, there are no final conclusions to be drawn from all this. But it is evident that at least two major problems cry out for solution. The one is that of overcrowding and low standards ; the other, tied up with it but more in the long term, is that of the rôle which the universities are required ultimately to play in the country's life. Is there a valid mean between the two extreme conceptions, of the universities as moated and guarded academic castles on the one hand, and as mediocre professional-technical training schools (supplying hordes of ill-qualified candidates for often non-existent posts) on the other ? The decisions are not easy to make; and post-war trends may not become fully clear until outward conditions have had a chance of returning more or less to normal and (though this should not wait upon normality but rather help to further it) until the Italian Government has had time to put into operation a suitable plan of campaign.

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REPORT OF THE OXFORD UNIVERSITY DRAMA COMMISSION. (*Oxford University Press*, 7*s.* 6*d.*).

This large slim volume consists of ten double pages of the Commission's report, eight similar pages of a Supplementary Architectural Report by F. Gibberd, eleven pages of architectural plans, and nine pages of photographs of models made to illustrate these plans. Our review will limit itself to the text and the implications of the Commission's report; the rest can only be handled properly by an expert in architecture and theatre-craft.

The members of the Commission were four Oxford men who, through the generosity of Sir Alexander Korda, went to America to report on American methods of incorporating the study of drama in their academic curricula. They visited those universities in which there are active departments of drama, for example, Western Reserve, Brown, Yale, Princeton, etc. *Universities' Quarterly* (Vol. I, No. 2) has already published an article by a member of the Commission, Neville Coghill. The present report accepts the case there presented for university drama as already established, and is more especially concerned with the extent and the manner in which the study of drama should be recognised and provided for in an English pattern of academic discipline.

Before formulating its recommendations, the Commission provides fuller information about the American practices, and indicates how indigenous they are to America's idea of the function of its universities in the national economy and culture. This relationship to the American tradition explains the excellence of their best departments of drama; at the same time, it is a salutary warning to the Commission against wholesale imitation. Hence its recommendations are wisely cautious. In form, they are limited to proposals for Oxford, but by implication (and sometimes more) they apply to other universities. They recommend that a university should own a theatre of its own, especially adapted for experimental performances. It would be a safe place in which students should not mainly be the actors, but the spectators of professional performances organised by co-operation with repertory companies, C.E.M.A., and the British Drama League. Such performances would widen the cultural experience of all undergraduates, and, for students of a literary school, might in some measure be directly ancillary to their academic programme. Moreover, such a theatre could be a means of linking the academic community with the non-academic society of its locality. A further recommendation is that universities should have at least one member of its staff who is expert in knowledge of the theatre.

The important thing is that they do not recommend the setting up of a full academic department of drama, with its own curriculum, and its own Honours' School. The basic reason is that a school of drama could not omit so many of the techniques which comprehensively make theatre-craft—speech, acting, costuming, stagecraft, production, etc.—hence it would be overloaded, and would be more technical and vocational than seems compatible with the English idea of an academic school as primarily a rigorous intellectual discipline. We heartily concur. Indeed, we would go further. Fully recognising the desira-

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bility of a university theatre admitting, too, all the advantages for it claimed in the report, we would urge caution on more general grounds.

The great academic problem of our generation is the restitution of the prestige of the Arts Faculties; it is urgent that their fundamental academic function be reconsidered. At least to one person who has lived in universities (and not otherwise) since 1908 it is clear that the vital impact of an Arts culture on society has declined enormously.

A school of drama may strike contacts with the living cultural interests of its environment; but they are peripheral rather than central ones. Moreover the great dramatists (in prose or verse) are by nature poets who, in some sense, accidentally chose drama as their means of expression. What they express —that is what they contribute to mankind's awareness of life—is the source and the measure of their worth. Admittedly since they employ the medium of drama, some aspect of that awareness is not fully to be apprehended except when it is presented through their own technique. But only a small, a very small, part of their text is substantially modified in its significance by that mode of presentation. The bulk of it, the literary stuff of written drama, is directly accessible to the imagination without this or that man's particular manner of staging it. A great producer adds something to our sense of the play he produces; but he does not remake nor even add to Shakespeare. It is primarily through his words that Shakespeare has provided mankind with that enlarged consciousness of the nature of man and of life by virtue of which Shakespeare is found to be one of the world's greatest poets and dramatists.

A university theatre is a splendid addition to academic resources for enriching culture; but it is not, under present circumstances, a first priority. What is mainly needed in academic policy is a humanising of its basic arts subjects, and a consolidation of those which are at the core of a liberal humanist tradition.

H. B. CHARLTON.

THE ROAD TO SURVIVAL. By William Vogt. (*Victor Gollancz*, 15*s*.)

The publication of the English edition of this notable book is indeed welcome. Through its masterly presentation of facts and its persuasive style of writing, it draws attention to one of the most urgent problems—if not the most urgent of the day—the relation of the food resources of the world, to world population.

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plea he makes for more research into what is happening with regard to such matters as soil erosion, the carrying capacity of grass lands, the supplies of water, the cause of floods, the extermination or the artificial encouragement of wild-life. He shows that research in individual countries is not enough, but that co-operative investigation between different countries is essential, as is also assistance for the poorer countries. He also pleads for more research in the social sciences—economic, anthropological, psychological, and general semantic—which bear on the problems involved.

After research comes education, and he stresses the urgent need for many more trained men to undertake the necessary action, and shows how their work in its turn needs to be supported and encouraged by public opinion.

As a result there must be the call for an "action programme" in nearly all countries, including the control of the hydrologic cycle, the protection of forests and re-forestation, controlled grazing, and improved farming methods.

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The book is fascinating to read and should be of profound interest as regards any of the various avenues of approach to the problems involved.

EVA M. HUBBACK.

TOWARD GENERAL EDUCATION. *By* EARL J. MCGRATH AND OTHERS. (*New York*: *The Macmillan Company*, 1948). Pp. vii+224.

" General education," which is the subject of so much discussion in America, has no close parallel in Britain. The American college provides education for a much larger proportion of young adults than the British university does. Its students are academically less well prepared on entry, but they stay longer. The opposite number of the British student who takes an Honours degree in three years might take his first degree in four years and a Master's degree in a fifth, and possibly begin a Ph.D. course. When we read a programme for " general education," therefore, we should not judge it as the analogue of our Honours courses, but as mass education at the post-secondary stage. We are beginning to face the problems of " secondary education for all "; American " general education " is an attempt to solve the problem of college education for something approaching ever closer to all. Our comparative poverty prevents our having to face as yet the diffusion of liberal education beyond the secondary stage. Hence books such as this one will be less suggestive to those giving Honours courses than to those teaching subsidiary subjects in Sixth Forms or giving courses to pass degree students or extra-mural students. Members of the staff of the State University of Iowa discuss possible courses in " language and communication," the natural and social sciences and the humanities in a practical if somewhat pedestrian way.

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NOTES TOWARDS THE DEFINITE OF CULTURE. *By* T. S. ELIOT. (*Faber and Faber*, 10*s.* 6*d.*)

The constant misuse of the word "culture" has provoked Mr. Eliot to write this short book as a help towards its definition. His method is indirect, not to say negative. As his poetry compels us to search for Heaven by making us conscious of the intolerableness of Hell, so now he compels us to search for what we mean by culture by making us conscious of the conditions without which a culture is unlikely to flourish.

He approaches the problem from the point of view of society as a whole. There is no culture, either individual or group, without the culture of the whole of society. There is no culture of the whole of society unless that society has a religion. Culture is so to speak the incarnation of a religion; religion provides the framework of a culture. Without a common faith, all hopes of a higher culture, whether individual, class, national or world, are illusory.

Mr. Eliot goes on to examine the conditions for a culture within society. What is required is the correct hierarchical disposition within society of its various elements. Any upsetting of this disposition results in the disintegration or the atrophy of the culture. He discusses such devitalizing tendencies: the over-specialization of groups; the disunity of the churches when the reasons for separation are attenuated; the elimination of regional characteristics, and with them of the variety and richness of language, the dominance of politics over culture and education, of education over culture.

Equilibrium within the hierarchy requires a class system based on a qualitative division and responsible for the transmission of group culture. The stability of classes, but not their ossification, itself demands the family, which must finally be the transmitter of culture. The family is the basis of society, preserving tradition within the class—combining, that is, a suitable reverence towards the past with a responsibility towards the future.

Mr. Eliot makes some relevant remarks about the dangers of the planning of culture; culture cannot be planned, it is the unconscious background to our planning. State-supported culture diffusion, although at times necessary, is a culture substitute. Similarly, the spreading of education means not a higher culture, which is always a minority culture, but a lowering of standards and the abandoning of the study of those subjects by which culture is transmitted. Thus education for citizenship has tended to mean the study of those subjects that deal with the impersonal forces that govern society, i.e., of sociology and economics, divorced from ethics, and with a ridiculously foreshortened historical perspective. The result is the formation of minds that think only impersonally, and the gradual dehumanization of students.

While one may agree with Mr. Eliot's arguments, this book does nevertheless beg the main question. Religious conversion that takes place only on the intellectual plane being but superficial, an analysis such as this that reasons that society, to develop a culture, needs to be religiously orientated, leaves one, in a predominantly non-religious world, little further forward. Its value, however, is that, written with such authority, it does help us to define the problem as it is; and until that is done our efforts are likely, to say the least, to remain misdirected.

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THE CLASSICAL BACKGROUND OF ENGLISH LITERATURE. *By* J. A. K. THOMSON. (*Allen & Unwin*, 12*s.* 6*d.*).

Mr. Thomson distinguishes the classical tradition in " that sense of reasonableness, that dislike of the disproportionate " in the " rational or logical form imposed on the matter." He examines the poetry and prose of classical literature for the more particular applications of these general principles, and then goes on to trace their influence upon English literature.

The result is a book of considerable confusion. For, firstly, it is difficult to agree that the classical tradition does consist in those qualities—Mr. Thomson later himself makes the remark, without apparently realising its significance: " each generation finds in the classics what it looks for "—and, secondly, because there is little idea of how spiritual commerce is carried on.

To exemplify, " Critics," Mr. Thomson writes, " considering Shakespeare in relation to the University Wits . . . are disposed to think of him as resisting or transforming classical influence rather than accepting or yielding to it. On the whole the judgment is sound. . . " The implications of this kind of sentence—that to begin with, the antithesis is between " resisting or transforming " and " accepting or yielding to " a consequence itself of an attitude that seems to regard (*a*) the classical tradition as a prefabricated static *mise en scène*, and (*b*) form, the way a writer says something, as a pattern imposed, almost mechanically, on matter, what the writer has to say—will give an idea of some of the misconceptions from which the book suffers.

It is not so simple. Ingres, in his " Apotheosis of Homer " excludes Shakespeare from his illustrious company in the name of the classical tradition. Voltaire called Pindar the " boursoufle Thébain." Yet, Ingres, Shakespeare and Voltaire have each absorbed part of the classical tradition. Both Keats and Hölderlin wrote works entitled " Hyperion " ; needless to say the two works are enormously separate in thought, feeling and form. The point is that each artist demands from the classical tradition elements and ideas astonishingly various, and which go far beyond Mr. Thomson's definitions. Manley Hopkins and Shelley are influenced by it; Marlowe and Landor; Wordsworth and Blake; Swinburne and T. S. Eliot; Macaulay and James Joyce. The writer chooses from the tradition the parts that are living and fertilizing, the parts that are able to nourish his life and work. A book of value would have to show what parts, and why these parts, have been taken by particular writers at particular times.

For the classical tradition is a progress, a procession that piously buries its dead but continually receives new pilgrims. It is indeed time for " classicifists " to give up ignoring about two thousand years of development in the literature and language of Greece. It is a dangerous thing to limit a tradition of, say, three thousand years to one golden century—the 5th century B.C.—to see only certain aspects of that century; because in so doing one is liable to misunderstand not only the nature of tradition, but also that particular century itself. For a tradition that is important for a living literature is a changing order, an authentic legend—the legend, for instance, of the reborn god, of a god dead and resuscitated—and not a preconceived intellectual pattern of theme, or manner, or form. That this is so, Mr. Thomson seems to have little awareness.

P.S.

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